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10th Standard
Board Papers - July 2022

- 1.English EM**
- 2.Full Hindi**
- 3.Marathi EM**
- 4.Science 1**
- 5.Science 2**
- 6.History**
- 7.Geography**
- 8.Maths 1**
- 9.Maths 2**

BOARD ACTIVITY SHEET: JULY 2022

ENGLISH KUMARBHARATI

Time: 3 Hours

Total Marks: 80

Section I: Language Study

- Q.1 (A)**
- A1. Do as directed (any four):** [04 Marks]
- Identify the type of sentence based on its function:** (1)
Take what you please.
 - Spot the error in the following sentence and rewrite with its correction:** (1)
He run very fast
 - Pick out the participle from the given sentence:** (1)
I don't like frightening stories.
 - Use the given phrase in a meaningful sentence of your own:** (1)
to look forward.
 - Complete the word chain of Noun:** (1)
Strength,,,,
- (A2) Do as Directed (any two):** [04 Marks]
- Rewrite the following sentence into indirect narration/speech:** (2)
(a) "You are not tone – deaf" he said to me.
(b) "I made some money yesterday" he said.
 - Rewrite the given sentence using 'not only but also':** (2)
The state parties are responsible for identifying and nominating new sites.
 - Identify the tense of the underlined verb and rewrite the sentence in present continuous tense.** (2)
Life hits you in the head.
- (B) Do as Directed (any one):** [02 Marks]
- Change the given sentence into positive and comparative degree:** (2)
The biggest challenge knocking on the doors of human kind is fear and intolerance.
 - Use the given word as it is a noun as well as a verb in two different sentences:** (2)
'honour'

Section II: Textual Passages (Reading Skills, Vocabulary and Grammar)

- Q.2 (A) Read the following passage and do the activities:** [10 Marks]
- (A1) Complete the given sentences:** (2)
- Nothing that we say seems _____
 - If she can put some fight into him she can put _____
 - Nothing can be difficult _____
 - French soldiers are always beaten because _____

Robert : What is your name?
Joan : They always called me Jenny in Lorraine. Here in France, I am Joan. The soldiers call me the Maid.
Robert : How old are you?
Joan : Seventeen, so they tell me. It might be nineteen. I don't remember.

Robert : I suppose you think raising a siege is as easy as chasing a cow out of a meadow. You think soldiering is anybody's job?

Joan : I don't think it can be very difficult if God is on your side.

Robert : (*Grimly*) Have you ever seen English soldiers fighting? Have you ever seen them plundering, burning, turning the countryside into a desert? Have you heard no tales of their prince who is the devil himself, or of the English king's father?

Joan : You do not understand, squire. Our soldiers are always beaten because they are fighting only to save their skins and the shortest way to save your skin is to run away. But I will teach them all to fight for France. Then, they will drive the soldiers before them like sheep. You and Polly will live to see the day when there will be not a single English soldier on the soil of France.

Robert : (*To Poulengy*) This may all be nonsense, Polly. But the troops might just be inspired by it though nothing that we say seems to put any fire into them. Even the Dauphin might believe it. And if she can put some fight into him, she can put it into anybody.

(A2) Pick out from the extract of the play two lines that provide for:
Her optimism. (2)

(A3) Match the words/phrases in the Column 'A' to their meaning in Column 'B' (2)

	Column 'A' Words/Phrases		Column 'B' Meanings
(i)	Plundering	(a)	Grassland
(ii)	Meadow	(b)	Surround from all sides and attack
(iii)	To save their skin	(c)	To save their lives
(iv)	Raising a siege	(d)	Looting

(A4) Do as Directed: (2)

i. I don't remember (**Rewrite as an Affirmative Sentence**). (1)

ii. Even the Dauphin might believe it. (**Pick out the modal auxiliary**) (1)

(A5) Personal Response: (2)

As a monitor of your class, how would you boost the morale of your classmates to participate in various school competitions?

(B) Read the following passage and do the given activities: [10 Marks]

(B1) Write the statement and encircle the wrong alternatives: (2)

i. The novel is based on pure fiction/real facts.

ii. The novel draws heavily on his own life/biography.

iii. The writer worked for Red Cross Society during the Second World War/First World War.

iv. Hemingway's story ultimately became a story of triumph/disaster.

Hemingway's novel is based on real events and it also draws heavily on his own life. He had experience of fishing in the Cuban waters and like the old man he was also a fan of baseball. He worked for the Red Cross during the First World War and was injured by shrapnel when he was in Italy. Hemingway always talks about the need to struggle against defeat or death and how determination and endurance can help one to win in this struggle. The old man is at the end of the novel very near death, but we know that the story of his suffering and loss will live on in the memories of the people of his village. Ultimately his story becomes one of triumph because the tales of his life will live on even after his death. The novel was published in 1952, when people were trying to recover from the mass destruction wrought by the two world wars, and this tale of endurance and ultimate triumph immediately struck a chord with the readers.

Writing Style:

Hemingway's language is simple and pithy. He mostly writes in short and straight-forward sentences and practises an extreme economy in his use of words. This simplicity is deceptive and a reader can read his work again and again and find new layers of meaning every time.

(A2) From the given extract provide evidence for the following: (2)

	Actions	Evidences
(i)	Efforts of the peasants to kill the scorpion	
(ii)	Evil versus good	

(A3) Find an example of Onomatopoeia from the given extract. (1)

(B) Read the following poem and write an appreciation of it with the help of the given points in a paragraph format: [05 Marks]

The Pulley

When God at first made Man,
 Having a glass of blessings standing by;
 Let us (said He) "pour on him all we can:"
 Let the worlds riches, which dispersed lie,
 Contract into a Span.

So strength first made a way;
 Then beauty flow'd, then wisdom, honour, pleasure:
 When almost all was out, God made a stay,
 Perceiving that alone of all His treasures
 Rest in the bottom lay.

For if I should (said He)
 Bestow this jewel also on my creature,
 He would adore my gifts instead of me,
 And rest in Nature, not the God of Nature.
 So both should losers be.
 Yet let him keep the rest,
 But keep them with repining restlessness:
 Let him be rich and weary, that at last,
 If goodness lead him not, yet weariness
 May toss him to my breast.

- George Herbert

Points:

- * The title and the poet of the poem (1)
- * Rhyme scheme (1)
- * Figures of speech (1)
- * Central Idea/Theme (2)

**(Section IV: Non-Textual Passage)
 (Reading Skills, Vocabulary, Grammar and Summary)**

Q.4 (A) Read the following passage and complete the activities: [10 Marks]

(A1) State whether the following sentences are true or false: (2)

- i. The report expresses that only laws could provide women with the protection and facilities they deserve.
- ii. The situation in our country was very grave during the last two decades of the century.
- iii. In India, the bias against immunization of baby girls doesn't exist.
- iv. International organisation states that the one-fourth of women, who die in the world today, are Indians.

A research report published by a reputed International organisation states that the one fourth of the women, who die in the world today, are Indians. The report adds that the situation in the country was very grave during the last two decades of this century as the deaths were mostly due to malnutrition and disease. Despite this fact, it is found that the media is indifferent to building public awareness in this regard. From a month – long study of newspapers and periodicals, it was clear that there was no deliberate, systematic or sustainable effort to sensitise the public by investigative and factual coverage, not more than one percent, was related to issues of women-education, liberation etc. but not with survival and development. The rural women hardly figured in the media, so says that report.

The expectant mothers are undernourished, anaemic and hence they give birth to children who are handicapped. These children do not receive prenatal care. Even if such children survive, four to six months later they become susceptible to diarrhoea, respiratory or other infections because of insufficient nutrition, incomplete immunization, viral infection and improper treatment. The result is that by the time such children reach 3 years of age, they start showing signs of wasting. They do not grow to their full mental and physical potential.

Unfortunately, the bias against girl babies still continues. In the slum areas in India's metropolitan cities, there still exists a bias against immunization of baby girls. The report expresses a feeling that a social awareness not merely laws could provide woman with the protection and the facilities they deserve.

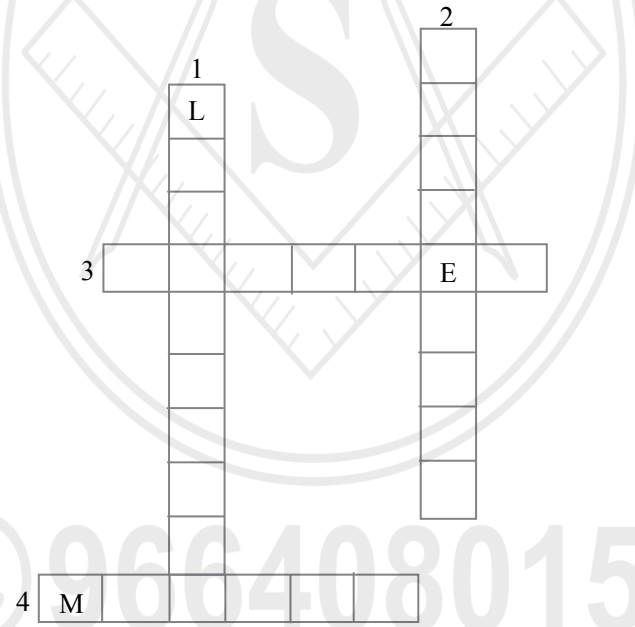
(A2) Complete the following:

(2)

Children become victims of diarrhoea and other diseases due to

(A3) Solve the crossword puzzle using words from the passage referring to the clues given:

(2)



	Down		Across
(i)	Freedom	(i)	Famous
(ii)	Consciousness	(ii)	Connected with mind

(A4) Do as directed:

(2)

- i. They do not grow to their full physical potential. (Add a question tag)
- ii. They give birth to children who are handicapped. (Make it into simple sentence)

(A5) Suggest four measures to combat malnutrition.

(2)

(B) Summary writing:

[5 Marks]

Read the above passage given in Q. No. 4 (A) and write a summary of it in a paragraph. Suggest a suitable title.

Section V: Writing Skills

Q.5 (A) Letter writing: **[05 Marks]**

(A1 or A2) Do any one of the following:

Imagine your Jay/Jaya residing at C/12 Sudhir Apartment, Ranpise Nagar, Akola – 444001

Read the given snippet and write the letter

Handwriting is an essential skill for both children and adults. Handwriting activates the brain more than key-board because it involves more complex motor and cognitive skills. Handwriting contributes to reading fluency because it activates visual perception of letters. Handwriting is a predictor of success in other subjects, because good handwriting has a positive impact on grades

A1. Formal Letter
Write a letter to the Principal of your school asking her/him to start handwriting improvement class.

Or

A2. Informal Letter
Write a letter to your friend Tara/Taresh to improve her/his handwriting. Explain how important it is.

Q.6 (A) Information Transfer. **[05 Marks]**

(A1 or A2) Do any one of the following:

(A1) Verbal to Non-Verbal :

Read the following information. Transfer it into a tree diagram and give a suitable title:

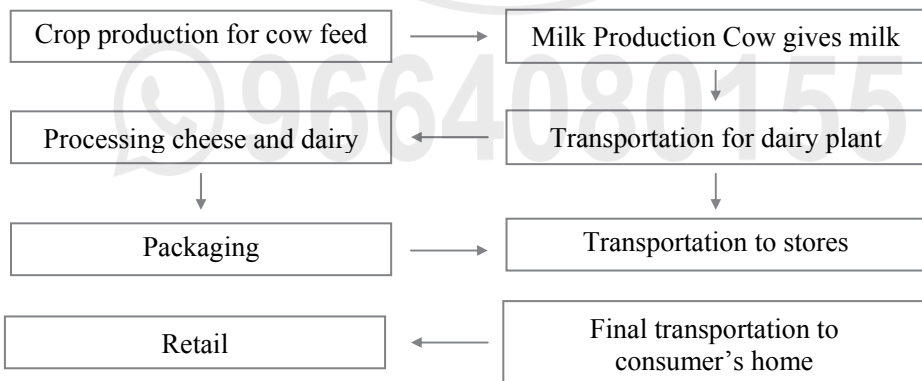
- * The tulsi plant is a close relative of a culinary basil but it is differentiated by its medicinal properties and some physical characteristics. There are three main types of tulsi plants:
- * Rama Tulsi (also known as Green Leaf Tulsi) – A green tulsi with light purple flowers and an aromatic, clove – like scent (thanks to its chemical component of eugenol, which is the main aroma in cloves and mellow flavour).
- * Krishna Tulsi (also known as Shyama Tulsi or Purple Leaf Tulsi) – A purple plant with a clove-like aroma peppery flavour.
- * Vana Tulsi (or Wild Leaf Tulsi) – A bright, light green tulsi plant that grows wild and is indigenous to many areas of Asian and North/East Africa, it has a more lemony aroma and flavour.

OR

(A2) Non-Verbal to Verbal:

Transfer the information into a paragraph:

Observe the flow chart of process of cheese and other dairy products from milk and write a paragraph on it. Suggest a suitable title:



(B) Speech/view-counterview:

Attempt any one of the following [B1 or B2]:

[05 Marks]

(B1) Speech writing:

Prepare a speech to be delivered on World Family Day (15th May):

The subject given to you is 'A family must have one meal together'.

Use the following points:

- * Develops family bond and values.
- * Helps to plan and connect.
- * Give opportunity to share experience.
- * Displays appropriate manners and discipline.
- * Helps to cope and adjust with life.

OR

Write your counterview on:

(B2) Write your counterview in a paragraph on the topic 'It is better to follow your heart than the advice of ten' views:

Views:

- * People find it easy to advise
- * Not everyone is your well-wisher.
- * You are the master of your fate.
- * Trust your instincts.

**Section VI: Creative Writing
(Expansion of theme/News Report)**

Q.7 (A) Do any one of the following (A1 or A2):

[05 Marks]

(A1) Expand the theme:

Expand the following idea in 80-100 words:

'Little drops of water make a mighty ocean'.

OR

(A2) News Report:

Prepare a news report based on the following in 80-100 words:

'You rescued a pigeon entangled in a string of a kite'.

(B) Developing a story/Narration:

Do any one of the following: (B1 or B2)

[05 Marks]

(B1) Developing a story:

Develop a story in about 80-100 words with the following ending. Give a suitable title:

..... Thus Hari realised that many friends will walk in our life, but only true friends will leave their mark.

OR

(B2) Narrate an experience in about 80 – 100 words with the following beginning. Give a suitable title:

The concept of incredible India stirred my mind when

बोर्ड कृतिपत्रिका: जुलाई 2022

हिंदी लोकभारती

समय: 3 घंटे

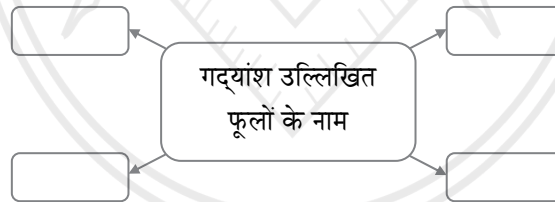
कुल अंक: 80

विभाग 1 – गद्य : 20 अंक

1. (अ) निम्नलिखित पठित गद्यांश पढ़कर दी गई सूचनाओं के अनुसार कृतियाँ कीजिए: [8]

बहन उनको संगीत की, भक्ति की तथा प्रेमयुक्त सलाह की खुराक दें। आगे चलकर संस्था की जमीन पर छोटे-छोटे मकान बनाए जाएँगे और उसमें संस्था के नियम के अधीन रहकर आने वाली महिलाएँ दो-दो, चार-चार का परिवार चलाएँगी, ऐसी संस्थाएँ मैंने देखी हैं। इसलिए जो बिलकुल संभव है, बहुत ही उपयोगी है। ऐसा ही काम मैंने सूचित किया है, इतने वर्ष के बहन के परिचय के बाद उनकी शक्ति, कुशलता और उनकी मर्यादा का ख्याल मुझे है। प्रत्यक्ष कोई हिस्सा लिए बिना मेरी सलाह और सहारा तो रहेगा ही। आगे जाकर बहन को लगेगा कि उनको तो मात्र निमित्तमात्र होना था। संस्था अपने आप चलेगी। समाज में ऐसी संस्था की अत्यंत आवश्यकता है। उस आवश्यकता में से ही उसका जन्म होगा। मुझे इतना विश्वास न होता तो बहन के लिए ऐसा कुछ मैं सूचित ही नहीं करता। तुम दोनों इस सूचना का प्रार्थनापूर्वक विचार करना लेकिन जल्दी में कुछ तय न करके यथासमय मुझे उत्तर देना। बहन यदि हाँ कहे तो अभी से आगे का विचार करने लगूँगा। यहाँ सरदी अच्छी है। फूलों में गुलदुदी, क्रिजेन्थीमम फूल बहार में है। उसकी कलियाँ महीनों तक खुलती ही नहीं मानो भारी रहस्य की बात पेट में भर दी हो और होठों को सीकर बैठे गई हों। जब खिलती हैं तब भी एक-एक पंखुड़ी करके खिलती हैं। वे टिकते हैं बहुत। गुलाब भी खिलने लगे हैं। कोस्मोस के दिन गए।

- (1) संजाल में लिखिए: [2]



- (2) (i) आश्रम में बहनों को यह खुराक मिले [1]

(1) — भक्ति की — (2)

- (ii) काकासाहब को बहन की इन बातों का खयाल है [1]

(1) — मर्यादा — (2)

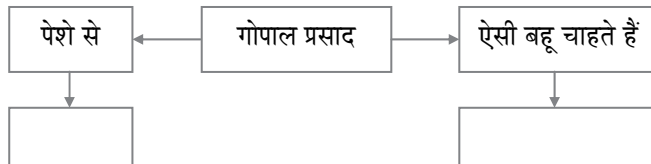
- (3) (i) निम्नलिखित शब्दों के कृदन्त रूप बनाइए: [1]
 (1) चलना - (2) रहना -
 (ii) निम्नलिखित शब्दों के तद्धित रूप बनाइए: [1]
 (1) गुलाब - (2) रहस्य -
 (4) 'अनुशासन का महत्त्व' इस विषय पर 25 से 30 शब्दों में अपने विचार लिखिए। [2]

(आ) निम्नलिखित पठित गद्यांश पढ़कर दी गई सूचनाओं के अनुसार कृतियाँ कीजिए: [8]

रामस्वरूप : अबे! धीरे-धीरे चल। अब तख्त को उधर मोड़ दे..... उधर।
 रतन : बिछा दें साहब?
 रामस्वरूप : और क्या करेगा? परमात्मा के यहाँ अक्ल बँट रही थी तू देर से पहुँचा था क्या? बिछा दूँ साहब!
 और यह पसीना किसलिए बहाया है?
 रतन : हीं-हीं-हीं।
 रामस्वरूप : और बीबी जी के कमरे में से हारमोनियम उठा ला और सितार भी। जल्दी जा।
 प्रेमा : लेकिन वह तुम्हारी लाड़ली बेटी उमा तो मुँह फुलाए पड़ी है।
 रामस्वरूप : क्या हुआ?
 प्रेमा : तुम्हीं ने तो कहा था कि उसे ठीक-ठाक करके नीचे लाना।
 रामस्वरूप : अरे हाँ, देखो, उमा से कह देना कि जरा करीने से आए। ये लोग जरा ऐसे ही हैं। खुद पढ़े-लिखे हैं, वकील हैं, सभा-सोसायटियों में जाते हैं; मगर चाहते हैं कि लड़की ज्यादा पढ़ी-लिखी न हो।
 प्रेमा : और लड़का?
 रामस्वरूप : बाप सेर है तो लड़का सवा सेर। बी.एस्सी. के बाद लखनऊ में ही तो पढ़ता है, मेडिकल कॉलेज में। कहता है कि शादी का सवाल दूसरा है, पढ़ाई का दूसरा। क्या करूँ, मजबूरी है।
 रतन : बाबू जी, बाजू जी!
 रामस्वरूप : अरे प्रेमा, वे आ भी गए।..... तुम उमा को समझा देना, थोड़ा-सा गा देगी। हँ-हँ-हँ! आइए! हँ-हँ!..... मकान ढूँढ़ने में कुछ तकलीफ तो नहीं हुई?
 गो. प्रसाद : नहीं! ताँगेवाला जानता था। रास्ता मिलता कैसे नहीं?
 रामस्वरूप : हँ-हँ-हँ! और कहिए शंकर बाबू, कितने दिनों की छुट्टियाँ है?

- (1) (i) कृति पूर्ण कीजिए : [2]
 रिश्ते लिखिए:
 (i) रामस्वरूप-रतन -
 (ii) रामस्वरूप-प्रेमा -
 (iii) प्रेमा-उमा -
 (iv) गोपाल प्रसाद-शंकर -

- (2) (i) लिखिए : [1]



- (ii) गद्यांश में उल्लिखित दो वादय: [1]
 (1) (2)
 (3) (i) निम्नलिखित शब्दों के वचन बदलकर फिर से लिखिए: [1]
 (1) बेटी - (2) शादियाँ -

- (ii) निम्नलिखित शब्दों के लिंग पहचानकर फिर से लिखिए: [1]
 (1) पसीना - (2) अक्ल -

- (4) 'बेटी बचाओ, बेटी पढ़ाओ' इस विषय पर 25 से 30 शब्दों में अपने विचार लिखिए। [2]

- (इ) निम्नलिखित अपठित गद्यांश पढ़कर दी गई सूचनाओं के अनुसार कृतियाँ कीजिए: [4]

कश्मीर की पर्वतमालाएँ आकाश चूमती नजर आती हैं। दूर तक फैली वादियों में देवदार और चीड़ के घने जंगल हैं। कल-कल करती हिमानी नदियाँ बहती हैं। अनेक बड़ी झीलें हैं। इस खूबसूरत भूमि ने सभी का मन मोह लिया है। गर्मियों में मीठे स्वादिष्ट फलों और मनमोहक फूलों की बहार होती है। सर्दियों में ऊँचे पहाड़ों की चोटियों से लेकर बलखाती घाटियों और वादियों तक चारों तरफ फैली बर्फ ही बर्फ। यह है कश्मीर, जिसकी प्राकृतिक छटा निराली और मनोहारी है। इसलिए इसे पृथ्वी का स्वर्ग कहते हैं। हवा में मस्ती के साथ झूमते सफेदे के लंबे, ऊँचे पेड़ों और घने चिनार वृक्षों की शोभा देखने योग्य है। चिनार के वृक्ष ईरान से लाकर यहाँ लगाए थे।

बादाम, अखरोट, नाशपाती, सेब, गोशा, आलूबुखारा और खुबानी यहाँ के विशेष फल हैं। यहाँ शहतूत भी होता है - जिसे 'शाहतुल' कहते हैं। जंगलों में इमारती लकड़ी मिलती है जो नदियों में बहाकर एक जगह से दूसरी जगह ले जाई जाती है। केसर की प्राकृतिक खेती का यहाँ सिर्फ एक ही स्थल है। श्रीनगर जाते हुए रास्ते में पांपोर के पास ही सड़क के दोनों ओर केसर के खेत नजर आते हैं। केसर को कश्मीर में 'क्वंग' और केसर के फूल को 'क्वंगपोश' कहते हैं। खूबसूरत नरगिस के मनमोहक फूलों की यहाँ भरमार रहती है।

- (1) एक-दो शब्दों में उत्तर लिखिए: [2]
 (i) वादियों में इनके घने जंगल = (1) (2)
 (ii) गद्यांश में आए मौसम = (1) (2)
 (2) 'भारत भूमि विविधता से संपन्न है' इस विषय पर 25 से 30 शब्दों में विचार व्यक्त कीजिए। [2]

विभाग 2 – पद्य : 12 अंक

2. (अ) निम्नलिखित पठित पद्यांश पढ़कर दी गई सूचनाओं के अनुसार कृतियाँ कीजिए: [6]

फागुन के दिन चार होरी खेल मना रे।
 बिन करताल पखावज बाजै, अणहद की झनकार रे।
 बिन सुर राग छतीसूँ गावै, रोम-रोम रणकार रे ॥
 सील संतोख की केसर घोली, प्रेम-प्रीत पिचकार रे।
 उड़त गुलाल लाल भयो अंबर, बरसत रंग अपार रे ॥
 घट के पट सब खोल दिए हैं, लोकलाज सब डार रे।
 'मीरा' के प्रभु गिरिधर नागर, चरण कँवल बलिहार रे ॥

- (1) संजाल पूर्ण कीजिए: [2]

	होली के समय आनंद निर्मित करनेवाले घटक	

- (2) ऐसे प्रश्न तैयार कीजिए जिनके उत्तर निम्न शब्द हों : [2]
 (i) अंबर - (ii) फागुन -
- (3) उपर्युक्त पद्यांश की अंतिम चार पंक्तियों का सरल अर्थ 25 से 30 शब्दों में लिखिए। [2]

(आ) निम्नलिखित पठित पद्यांश पढ़कर दी गई सूचनाओं के अनुसार कृतियाँ कीजिए:

[6]

बीत गया हेमंत भ्रात, शिशिर ऋतु आई!
 प्रकृति हुई द्युतिहीन, अवनि में कुंझटिका है छाई।
 पड़ता खूब तुषार पद्मदल तालों में बिलखाते,
 अन्यायी नृप के दंडों से यथा लोग दुख पाते।
 निशा काल में लोग घरों में निज-निज जा सोते हैं,
 बाहर श्वान, स्यार चिल्लाकर बार-बार रोते हैं।
 अर्धरात्रि को घर से कोई जो आँगन को आता,
 शून्य गगन मंडल को लख यह मन में है भय पाता।

(1) उत्तर लिखिए:

(i) पद्यांश में आए ऋतुओं के नाम:

[1]

(1) (2)

(ii) पद्यांश में आए पशुओं के नाम:

[1]

(1) (2)

(2) (i) निम्नलिखित शब्दों के लिए पद्यांश में प्रयुक्त विलोमार्थक शब्द ढूँढ़कर लिखिए:

[1]

(1) न्यायी × (2) सुख ×

(ii) पद्यांश में आए 'अवनि' शब्द के पर्यायवाची शब्द लिखिए:

[1]

(1) (2)

(3) उपर्युक्त पद्यांश की अंतिम चार पंक्तियों का सरल अर्थ 25 से 30 शब्दों में लिखिए।

[2]

विभाग 3 – पूरक पठन : 8 अंक

3. (अ) निम्नलिखित पठित गद्यांश पढ़कर दी गई सूचनाओं के अनुसार कृतियाँ कीजिए:

[4]

“यह भ्रष्टाचार की बहन है जैसे विशेष अवसरों पर हम अपने प्रियजनों, परिचितों, मित्रों को उपहार देते हैं। इसका स्वरूप भी कुछ-कुछ वैसा ही है लेकिन उपहार देकर हम केवल खुशियों या कर्तव्यों का आदान-प्रदान करते हैं। इससे अधिक कुछ नहीं जबकि रिश्वत देने से रुके हुए कार्य, दबी हुई फाइलें, टलती हुई पदोन्नति, रोकी गई नौकरी आदि में इसके कारण सफलता हासिल की जा सकती है। तब भी यह समाज के माथे पर कलंक है, इसका समर्थन कतई नहीं किया जा सकता, ऐसी मेरी धारणा है।” कहकर वह तेजी से बाहर निकल आया। जानता था कि यहाँ भी चयन नहीं होगा।

पर भीतर बैठे अधिकारियों ने गंभीरता से विचार-विमर्श करने के बाद युवक के सही उत्तर की दाद देते हुए उसका चयन कर लिया। आज वह समझा कि 'सत्य कुछ समय के लिए निराश हो सकता है, परास्त नहीं।'

(1) उत्तर लिखिए:

[2]

रिश्वत देने से होने वाले काम

(i) (ii)

(iii) (iv)

(2) 'भ्रष्टाचार एक अभिशाप', इस विषय पर अपने विचार 25 से 30 शब्दों में लिखिए।

[2]

(आ) निम्नलिखित पठित पद्यांश पढ़कर दी गई सूचनाओं के अनुसार कृतियाँ कीजिए:

[4]

चलतीं साथ
पटरियाँ रेल की
फिर भी मौन।
सितारे छिपे
बादलों की ओट में
सूना आकाश।
तुमने दिए
जिन गीतों को स्वर
हुए अमर।
सागर में भी
रहकर मछली
प्यासी ही रही।

(1) उचित जोड़ियाँ मिलाकर फिर से लिखिए:

[2]

	अ		आ
(i)	मछली	(1)	मौन
(i)	गीतों के स्वर	(2)	सूना
(iii)	रेल की पटरियाँ	(3)	प्यासी
(iv)	आकाश	(4)	अमर
			साथ

(2) 'जल ही जीवन है' इस पर अपने विचार 25 से 30 शब्दों में लिखिए।

[2]

विभाग 4 – भाषा अध्ययन (व्याकरण) : 14 अंक

4. सूचनाओं के अनुसार कृतियाँ कीजिए:

[14]

(1) निम्नलिखित वाक्य में आधोरेखांकित शब्द का शब्दभेद पहचानकर लिखिए:
यहाँ सरदी अच्छी है।

[1]

(2) निम्नलिखित अव्ययों में से किसी एक अव्यय का अर्थपूर्ण वाक्य में प्रयोग कीजिए:

[1]

(i) और

(ii) आह!

(3) कृति पूर्ण कीजिए:

[1]

संधि शब्द	संधि-विच्छेद	संधि भेद
.....	नि: + आशा
अथवा		
संतोष

- (4) निम्नलिखित वाक्यों में से किसी एक वाक्य की सहायक क्रिया पहचानकर उसका मूल रूप लिखिए: [1]
- (i) सिरचन का मुँह लाल हो गया।
- (ii) वे पुस्तक पकड़े न रख सके।

सहायक क्रिया	मूल क्रिया
.....

- (5) निम्नलिखित में से किसी एक क्रिया का प्रथम तथा द्वितीय प्रेरणार्थक रूप लिखिए: [1]

क्रिया	प्रथम प्रेरणार्थक रूप	द्वितीय प्रेरणार्थक रूप
(i) घूमना
(ii) बनना

- (6) निम्नलिखित मुहावरों में से किसी एक मुहावरे का अर्थ लिखकर उचित वाक्य में प्रयोग कीजिए: [1]
- (i) डींग मारना (ii) मुँह लटकाना

अथवा

अधोरेखांकित वाक्यांश के लिए कोष्ठक में दिए मुहावरों में से उचित मुहावरे का चयन करके वाक्य फिर से लिखिए: [1]

(बोलबाला होना, तिलमिला जाना)

पंडित बुद्धिराम काकी को देखते ही क्रोध में आ गए।

- (7) निम्नलिखित वाक्यों में से किसी एक वाक्य में प्रयुक्त कारक पहचानकर उसका भेद लिखिए: [1]
- (i) मैं अपनी टाँगों की ओर देखता हूँ।
- (ii) रूपा स्वभाव से तीव्र थी।

कारक चिह्न	कारक भेद
.....

- (8) निम्नलिखित वाक्य में यथास्थान उचित विराम-चिह्नों का प्रयोग करके वाक्य फिर से लिखिए: [1]
- केवल टीका, नथुनी बिछीया रख लिए थे

- (9) निम्नलिखित वाक्यों में से किन्हीं दो वाक्यों का सूचना अनुसार काल परिवर्तन कीजिए: [2]

(i) सोनाबाई अपने बच्चों के साथ आती है। (सामान्य भविष्यकाल)

(ii) चढ़ावे के नाम पर सिर्फ पाँच ग्राम सोने के गहने आएँगे। (पूर्ण भूतकाल)

(iii) आप इतनी देर से नाप-तौल करते है। (अपूर्ण वर्तमानकाल)

- (10) (i) निम्नलिखित वाक्य का रचना के आधार पर भेद पहचानकार लिखिए: [1]
- संतरी को जैसा कहा गया था, उसने वैसा ही किया।

- (ii) निम्नलिखित वाक्यों में से किसी एक वाक्य का कोष्ठक में दी गई सूचनानुसार परिवर्तन कीजिए: [1]

(1) मैं आज रात का खाना नहीं खाऊँगा। (विधानार्थक वाक्य)

(2) थोड़ी बातें हुई। (निषेधार्थक वाक्य)

(11) निम्नलिखित वाक्यों में से किन्हीं दो वाक्यों को शुद्ध करके वाक्य फिर से लिखिए:

[2]

- (i) अब मैं अपनी टाँगों का ओर देखता है।
- (ii) मानू इतने ही बोल सका।
- (iii) मँझली भाभी माँ का दुलारा बहू है।

विभाग 5 – रचना विभाग (उपयोजित लेखन) : 26 अंक

सूचना – आवश्यकतानुसार परिच्छेदों में लेखन अपेक्षित है।

5. सूचनाओं के अनुसार लेखन कीजिए:

[26]

(अ) (1) पत्रलेखन:

[5]

निम्नलिखित जानकारी के आधार पर पत्रलेखन कीजिए:

भार्गव/भाग्यश्री बारजगे, विजयनगर, सोलापुर से अपने मित्र/सहेली विट्ठल/विठाई वाघ, समता कॉलोनी, गेवराई को दसवीं कक्षा में प्रथम स्थान प्राप्त करने के उपलक्ष्य में अभिनंदन करने हेतु पत्र लिखता/लिखती है।

अथवा

विवेकानंद/विजया, कृष्णकुंज, सातारा से मा. व्यवस्थापक, अजय वस्तु भंडार, सादाशिव पेठ, पुणे – 4 को खेल सामग्री की माँग करते हुए पत्र लिखता/लिखती है।

(2) निम्नलिखित गद्यांश पढ़कर ऐसे चार प्रश्न तैयार कीजिए, जिनके उत्तर गद्यांश में एक-एक वाक्य में हों:

[4]

बाबू हरिदास का ईंटों का पजावा शहर से मिला हुआ था। आसपास के देहातों से सैकड़ों स्त्री-पुरुष, लड़के नित्य आते और पजावे से ईंटें सिर पर उठाकर ऊपर कतारों से सजाते। एक आदमी पजावे के पास पैसे लिए बैठा रहता था। मजदूरों को ईंटों की संख्या के हिसाब से पैसे मिलते इसलिए बहुत-से मजदूर बूते के बाहर काम करते। वृद्धों और बालकों को ईंटों के बोझ से अकड़े हुए देखना बहुत करुणाजनक दृश्य था। सबसे करुण दशा एक छोटे लड़के की थी। जो सदैव अपनी अवस्था के लड़कों से दुगुनी ईंटें उठाता और सारे दिन अविश्रांत परिश्रम और धैर्य के साथ अपने काम में लगा रहता। और लड़के बनिए की दुकान से गुड़ लाकर खाते, कोई सड़क पर जानेवाले इक्कों और हवा गाड़ियों की बहार देखता और कोई व्यक्तिगत संग्राम में अपनी जिह्वा और बाहू के जौहर दिखाता, लेकिन इस गरीब लड़के को अपने काम से काम था। उसमें लड़कपन की न चंचलता थी, न शरारत, न खिलाड़ीपन, यहाँ तक कि उसके होठों पर कभी हँसी भी न आती थी। बाबू हरिदास को उसकी दशा पर दया आती थी। कभी-कभी पैसे वाले को इशारा करते कि उसे हिसाब से अधिक पैसे दे दो। कभी-कभी वे उसे कुछ खाने को दे देते।

(आ) (1) वृत्तांत लेखन:

[5]

आदर्श विद्यालय, अमरावती में मनाए गए 'वृक्ष लगाओ – वृक्ष बचाओ' अभिमान का 60 से 80 शब्दों में वृत्तांत लेखन कीजिए।

(वृत्तांत में स्थल, काल, घटना का उल्लेख होना अनिवार्य है।)

अथवा

कहानी लेखन:

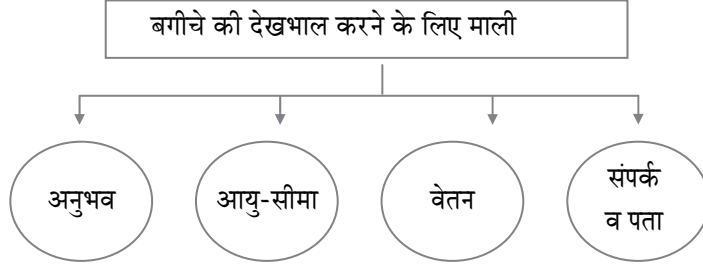
निम्नलिखित मुद्दों के आधार पर 70 से 80 शब्दों में कहानी लिखकर उसे उचित शीर्षक दीजिए तथा सीख लिखिए:

भूखा कुत्ता – रोटी के लिए दर-दर भटकना – कूड़े में रोटी पाना – तालाब के पास बैठकर रोटी खाने का इरादा – तालाब में खुद की परछाई देखना – भौंकना – रोटी का तालाब में गिर जाना – पछतावा – सीख।

2) विज्ञापन लेखन:

[5]

निम्नलिखित जानकारी के आधार पर 50 से 60 शब्दों में विज्ञापन तैयार कीजिए:



(इ) निबंध लेखन:

[7]

निम्नलिखित विषयों में से किसी एक विषय पर 80 से 100 शब्दों में निबंध लिखिए:

- (1) यदि मैं प्रधानाध्यापक होता...
- (2) पुस्तक की आत्मकथा
- (3) विविधता में एकता

 9664080155

बोर्ड कृतिपत्रिका: जुलै 2022

मराठी अक्षरभारती

वेळ: 3 तास

एकूण गुण: 80

कृतिपत्रिकेसाठी सूचना: -

- (1) सूचनेनुसार आकलन कृती व व्याकरण यांमधील आकृत्या काढाव्यात.
- (2) आकृत्या पेननेच काढाव्यात.
- (3) उपयोजित लेखनातील कृतीसाठी (सूचना, निवेदन), आकृतीची आवश्यकता नाही. तसेच, या कृती लिहून घेऊ नयेत.
- (4) विभाग 5 – उपयोजित लेखन प्र.5 (अ) (2) सारांशलेखन या घटकासाठी गद्य विभागातील प्र.1 (इ) अपठित उतारा वाचून त्या उताऱ्याचा सारांश लिहावयाचा आहे.
- (5) स्वच्छता, नीटनेटकेपणा व लेखननियमांनुसार लेखन यांकडे जाणीवपूर्वक लक्ष द्यावे.

विभाग 1 : गद्य

[18 गुण]

1. (अ) उताऱ्याच्या आधारे सूचनेनुसार कृती करा:

[7]

(1) कोण ते लिहा:

(2)

(i) आय.आय. टी., कानपूरचा विद्यार्थी -

(ii) स्वच्छतेची आवड असलेली -

अभिषेकनं दार उघडलं आणि कामवाल्या रेखामावशी आत आल्या. आल्या आल्या त्यांनी किचनमधील सिंकमध्ये वाट पाहणाऱ्या भांड्यांकडे आपला मोर्चा वळवला. अभिषेकला आज उठायला उशीरच झाला होता. काल त्यांच्याकडे सुमित आला होता कानपूरहून. सुमित म्हणजे अभिषेकचा आतेभाऊ. तो आय.टी. कानपूरला शिकत होता. काल संध्याकाळी सुमित आल्यापासून गप्पांसोबत सुमितच्या लॅपटॉपवर त्यानं केलेले नवे प्रोजेक्ट अभिषेक पाहत होता. त्यामुळे रात्री झोपायला दोन वाजले. “काय हो हे, तुम्हीच फरशी पुसता आणि तुम्हीच ती घाण करता?” हॉलमधून स्नेहलचा आवाज आला. अभिषेक हॉलमध्ये आला तर रेखामावशी फरशी पुसत होत्या; पण मागे त्यांच्या पायाचे काळे मळकट ठसे पुसलेल्या फरशीवर उमटले होते. स्वच्छतेची भोक्ती असलेली स्नेहल त्यामुळे त्रासली होती. रेखामावशीही बिचाऱ्या वरमल्या होत्या.

“अवो, स्नेहाताई, मी कुठं एसीत बसूनशान काम करत्ये बाई. शेनामातीत काम करावं लागतं! आन आमच्या वस्तीचा रस्ता बी समदा उखणलाय. समदी धूळ लागती पायास्नी. आन धा-धा मिन्टाला हातपाय धोयाला येळ बी नाय आन पानी तरी कुठं हाय बक्कळ?”

(2) आकृतिबंध पूर्ण करा:

(2)

रेखामावशीच्या पायांना धूळ लागण्याची कारणे



(3) स्वमत :

(3)

‘तापानं फणफणलीय आपली धरती’ ही स्थिती बदलण्यासाठी उपाय सुचवा.

(आ) उताऱ्याच्या आधारे सूचनेनुसार कृती करा:

171

(1) चौकटी पूर्ण करा:

(2)

- (i) वाधिणीच्या पिल्लांचे वय -
- (ii) वाधिणीला अवगत असलेली कला -

साधारणतः कुत्र्यापेक्षा लहान आकाराची ही पाच महिन्यांची वाधिणीची पिल्लं होती. या वयात लहान मुलं जशी खेळकर असतात, तशीच ही खेळकर होती. एकमेकांचा पाठलाग करणं, मारामारी करणं, पाण्यात उड्या घेणं असे खेळ सुरू झाले. मध्येच आई वळून एखाद्या पिल्लाला मायेने चाटत होती. थोडा वेळ बसल्यावर ती पटकन उभी राहिली. डोकं वळवून तिनं हळूच 'ऑडवड' असा आवाज केला. हा पिल्लांना मागं येण्याबद्दलचा इशारा होता. लगेच वळून ती चालायला लागली. हिंनं जंगलात कुठंतरी नक्कीच एखादं सांबर, रानगवा, नीलगाय, रानडुकराची शिकार साधली असावी; पण अशी शिकार जड असल्यानं ती उचलून पिल्लापर्यंत आणणं शक्य नसतं. त्यामुळं पिल्लांजवळ येऊन घटकाभर पाण्यात बसून तिनं विश्रांती घेतली होती आणि आता ती पिल्लांना त्या शिकारीकडं घेऊन जात होती. या चार पिल्लांसोबतच स्वतःच पोट भरण्यासाठी तिला सतत कोणती-कोणती शिकार करणं आवश्यकच होतं. त्या कलेत ही चांगली पारंगत होती. वाधिणीनं नाला पार करून बाबूंच्या गंजीत पाय ठेवला. आत शिरण्याआधी तिनं वळून पिल्लं सोबत येताहेत की नाही हे पाहून घेतलं.

(2) कृती करा :

(2)

वाधिणीच्या पिल्लांचे खेळ



(3) स्वमत:

(3)

'लेखकाला वाधिणीतील आईची झलक जाणवली', हे विधान पाठाच्या आधारे स्पष्ट करा.

अपठित गद्य

(इ) उताऱ्याच्या आधारे सूचनेनुसार कृती करा:

[4]

(1) कारणे लिहा:

(2)

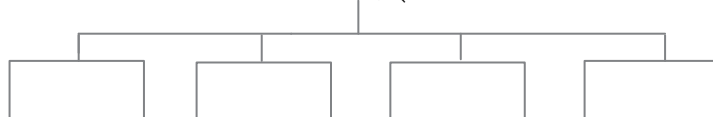
- (i) माणसाला श्रेष्ठ कलाकृतींचा आस्वाद घेता आला पाहिजे, कारण
- (ii) एखादा माणूस साक्षर असूनदेखील सुसंस्कृत नसतो, कारण

माणसाला श्रेष्ठ कलाकृतींचा आस्वाद घेता आला पाहिजे कारण श्रेष्ठ कलाकृतींमध्ये जीवन फुलवण्याची अमर्याद शक्ती असते. नाटक पाहणे, पेट्टीच्या सुरांत रमणे, कुस्त्यांची रणधुमाळी अवलोकणे किंवा क्रिकेटची टेस्ट मॅच पाहण्यात दंग होणे यांतील मौज काही औरच आहे. साहित्य, संगीत, नाट्य, चित्र यांसारख्या कलांनी माणसाच्या जीवनाला समृद्धी आणलेली आहे. मानवाला सुसंस्कृत बनवले आहे. परंतु एखादा माणूस साक्षर असूनही सुसंस्कृत नसतो, कारण जीवनातील आनंद कसा लुटावा हे त्याला ठाऊक नसते. कलेचे रहस्य जाणण्याची दृष्टी त्याला प्राप्त झालेली नसल्याने जीवनात त्याचे मन कोठेच रमत नाही. माणसाच्या जीवनात विरंगुळा जितका जास्त येईल, तितके त्याचे जीवन अधिक सुखी बनेल.

(2) आकृतिबंध पूर्ण करा :

(2)

माणसाच्या जीवनात समृद्धी आणणाऱ्या कला



2. (अ) कवितेच्या आधारे सूचनेनुसार कृती करा:

[8]

(1) कोण ते लिहा:

(2)

- (i) चंद्रकिरण पिऊन जगणारा पक्षी –
- (ii) व्यक्तीला सदैव सुख देणारा –

जेवीं चंद्रकिरण चकोरांसी । पांखोवा जेवीं पिलियांसी ।
जीवन जैसे कां जीवांसी । तेवीं सर्वासी मृदुत्व ॥
जळ वरिवरी क्षाली मळ । योगिया सबाह्य करी निर्मळ ।
उदक सुखी करी एक वेळ । योगी सर्वकाळ सुखदाता ॥
उदकाचें सुख तें किती । सर्वेचि क्षणें तृषितें होती ।
योगिया दे स्वानंदतृप्ती । सुखासी विकृती पै नाही ॥
उदकाची जे मधुरता । ते रसनेसीचि तत्त्वतां ।
योगियांचे गोडपण पाहतां । होय निवविता सर्वेद्रियां ।
मेघमुखें अधःपतन । उदकाचें देखोनि जाण ।
अधःपार्ते निवती जन । अन्नदान सकळांसी ॥
तैसे योगियासी खालुतें येणें । जे इहलोकीं जन्म पावणें ।
जन निववी श्रवणकीर्तनें । निजज्ञानें उद्धरी ॥

(2) खालील तक्ता पूर्ण करा :

(2)

योगी पुरुष आणि पाणी यांतील फरक स्पष्ट करा :

योगी पुरुष	पाणी
(i)	(i)
(ii)	(ii)

(3) प्रस्तुत कवितेतील शब्दांचा अर्थ लिहा:

(2)

- (i) पांखोवा – (ii) उदक – (iii) तृषित – (iv) क्षालणे –

(4) काव्यसौंदर्य :

(2)

योगी पुरुष आणि पाणी हे दोघेही सामाजिक कार्य करतात, हे स्पष्ट करा.

(आ) खालील दोन कवितांपैकी कोणत्याही एका कवितेसंबंधी दिलेल्या मुद्द्यांच्या आधारे कृती सोडवा.

[8]

मुद्दे	'अंकिला मी दास तुझा' किंवा 'स्वप्न करू साकार'	
(1) प्रस्तुत कवितेचे कवी / कवयित्री-		
(2) प्रस्तुत कवितेचा विषय-		
(3) प्रस्तुत ओळीचा सरळ अर्थ लिहा.	नामा म्हणे मेघा जैसा विनवितो चातक जैसा.	हजार आम्ही एकी बळकट सर्वांचे हो एकच मनगट
(4) प्रस्तुत कविता आवडण्याचे वा न आवडण्याचे कारण		
(5) प्रस्तुत शब्दांचा अर्थ लिहा.	(i) कनवाळू – (ii) काज – (iii) सवे – (iv) पाडस –	(i) विभव – (ii) हस्त – (iii) श्रम – (iv) तन –

(1)

(1)

(2)

(2)

(2)

विभाग 3 : स्थूलवाचन

[6 गुण]

3. खालीलपैकी कोणत्याही दोन कृती सोडवा.

- (1) टीप लिहा – व्युत्पत्ती कोशाचे कार्य.
- (2) पणतीच्या उदाहरणातून 'जाता अस्ताला' या कवितेत व्यक्त झालेला विचार स्पष्ट करा.
- (3) "आधी केले मग सांगितले", या उक्तीचा यथार्थता 'मोठे होत असलेल्या मुलांनो.....' या पाठाच्या आधारे स्पष्ट करा.

विभाग 4 : भाषाभ्यास

[16 गुण]

4. (अ) व्याकरण घटकांवर आधारित कृती:

[8]

(1) खालील वाक्यांचा प्रकार ओळखा:

(2)

- (i) पांढरा रंग कोणाला आवडत नाही?
- (ii) किती सुंदर आहे ही बाग!

(2) कंसातील सूचनेनुसार वाक्य रूपांतर करा:

(2)

- (i) तू आता लहान राहिला नाहीस. (होकारार्थी करा.)
- (ii) दररोज अभ्यास कर. (विधानार्थी करा.)

(3) खालील वाक्प्रचारांचा अर्थ सांगून वाक्यात उपयोग करा: (कोणतेही दोन)

(4)

- (i) अंगाचा तिळपापड होणे.
- (ii) तथ्य असणे.
- (iii) ऋण असणे.

(आ) भाषिक घटकांवर आधारित कृती:

[8]

(1) शब्दसंपत्ती:

(i) खालील शब्दांचे समानार्थी शब्द लिहा:

(1)

- (i) घर
- (ii) आई

(ii) खालील शब्दांचे विरुद्धार्थी शब्द लिहा.

(1)

- (i) सोपे ×
- (ii) दिवस ×

(iii) शब्दसमूहाबद्दल एक शब्द लिहा:

(1)

कविता करणारा

(iv) खालील शब्दांचे लिंग बदला.

(1)

- (i) शिक्षक
- (ii) विद्यार्थी

(2) लेखननियमांनुसार लेखन:

(2)

खालील वाक्ये लेखननियमांनुसार लिहा:

- (i) अशा परिस्थितीत माझी शाळा सुरू झाली.
- (ii) पूलाच्या जवळपास भीक्षेकरी म्हातारा दिसला.

(3) विरामचिन्हे:

(2)

खालील विरामचिन्हांची नावे लिहा:

- (i) ,
- (ii) .
- (iii) !
- (iv) ?

विभाग 5 – उपयोजित लेखन

[24 गुण]

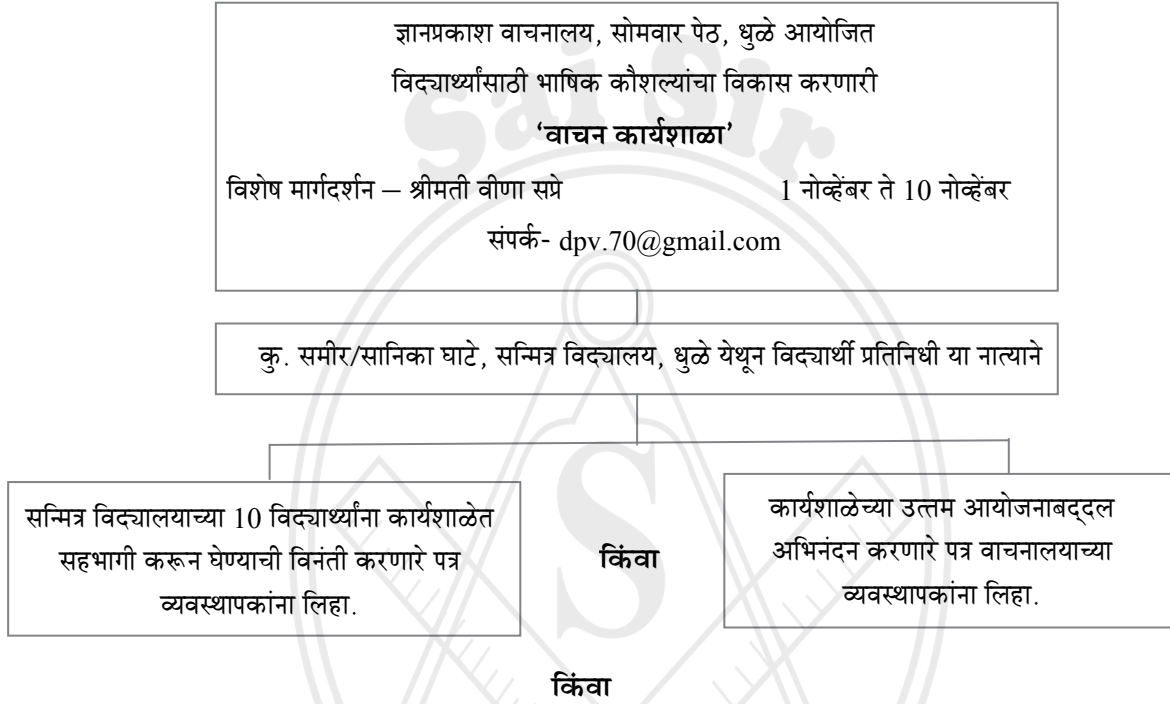
5. (अ) खालील कृती सोडवा:

(6)

(1) पत्रलेखन:

खालील निवेदन वाचा व त्याखालील कोणतीही एक कृती सोडवा.

(6)



(2) सारांशलेखन

विभाग - 1 : गद्य (इ) (प्र. क्र. 1- इ) मधील अपठित गद्य उताऱ्याचा 1/3 एवढा सारांश तुमच्या शब्दांत लिहा.

(आ) खालीलपैकी कोणत्याही दोन कृती सोडवा:

[10]

(1) जाहिरात लेखन:

(5)

शालेय गणवेशाच्या दुकानाची आकर्षक जाहिरात तयार करा.

(2) बातमी लेखन:

(5)

'अभिनव विद्यालय', औरंगाबाद येथे दि. ऑक्टोबर रोजी 'वाचन प्रेरणा दिन' संपन्न झाला. वरील कार्यक्रमाची बातमी लिहा.

(3) कथालेखन:

(5)

खालील मुद्द्यांच्या आधारे कथा लिहा:

मुद्दे: राजाची अंगठी चोरीला – सेवकांवर संशय – हुशार प्रधानाची युक्ती – सर्व सेवकांना समान लांबीच्या काठ्या – 'जो चोर त्याची काठी दुसऱ्या दिवशी 2 इंच वाढणार' – दुसऱ्या दिवशी एका सेवकाची काठी 2 इंच कमी – खरा चोर सापडणे.

(इ) लेखनकौशल्यः

खालील लेखनप्रकारांपैकी कोणतीही एक कृती सोडवा:

[8]

(1) प्रसंगलेखनः

टिळक मंदिर सभागृह
'भव्य रांगोळी प्रदर्शन'

विविधरंगी
कलात्मक रांगोळ्या

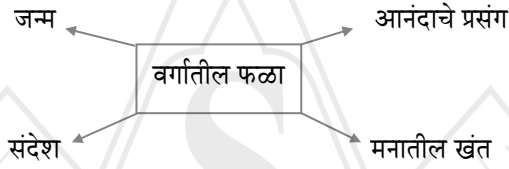
तीन सर्वोत्कृष्ट
रांगोळ्यांना पारितोषिके

* तब्बल 50 स्पर्धक सहभागी

वरील प्रसंगी तुम्ही उपस्थित होतात अशी कल्पना करून प्रसंगलेखन करा.

(2) आत्मकथन

दिलेल्या मुद्द्यांच्या आधारे चौकटीतील घटकाचे आत्मकथन लिहा.



(3) वैचारिकः

'झाडे लावा, पृथ्वी वाचवा' या विषयावर तुमचे विचार लिहा.

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BOARD ACTIVITY SHEET: July 2022

Science and Technology Part - 1

Time: 2 Hours

Max. Marks: 40

- Note:**
- i. All questions are compulsory.
 - ii. Use of a calculator is not allowed.
 - iii. The numbers to the right of the questions indicate full marks.
 - iv. In case of MCQs (Q. No. 1(A)) only the first attempt will be evaluated and will be given credit.
 - v. For each MCQ, the correct **alternative** (A), (B), (C) or (D) with subquestion number is to be written as an answer.
For Eg.: (i) (A), (ii) (B), (iii) (C)
 - vi. Scientifically correct, labelled diagrams should be drawn wherever necessary.

Q.1. (A) Choose the correct alternative and write the correct option:

[5]

- i. The formula for escape velocity is _____

(A) $\sqrt{\frac{2M}{R}}$	(B) $\sqrt{\frac{2GM}{R}}$
(C) $\sqrt{\frac{GM}{R^2}}$	(D) $\sqrt{\frac{Gm}{R^2}}$
- ii. To prevent rusting, a layer of _____ metal is applied on iron sheets.

(A) potassium	(B) sodium
(C) magnesium	(D) zinc
- iii. Carbonate ores are strongly heated in a limited supply of air to transform them into oxides, this process is called _____.

(A) leaching	(B) calcination
(C) roasting	(D) tinning
- iv. For a particular value of 'i', the value of 'r' becomes equal to 90°. This value of 'i' is called the _____.

(A) critical angle	(B) angle of deviation
(C) angle of refraction	(D) angle of emergence
- v. The _____ controls the amount of light entering the eye.

(A) iris	(B) pupil
(C) cornea	(D) retina

(B) Answer the following

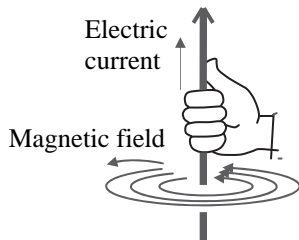
[5]

- i. Match the correct pair:

Column 'A'		Column 'B'
Electric	a.	The ohm
	b.	The ampere
	c.	The volt

- ii. What is the height of the low earth orbit satellite above the earth's surface?
- iii. State true or false :
When the incident ray is parallel to the principal axis, the refracted ray does not pass through the principal focus.
- iv. Find the odd man out :
Methane, Ethene, Propane, Butane:

v. Identify the law from the given figure :



Q.2. (A) Give scientific reasons (any two): [4]

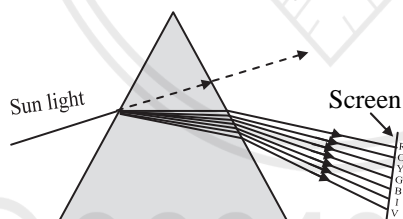
- i. Generally, most of the carbon compounds are bad conductors of electricity.
- ii. A magnetic needle shows decreasing deviation of its angle as distance from a current conductor is increased.
- iii. We see the sun even before it emerges above the horizon.

(B) Answer any three of the following questions: [6]

- i. How much heat energy is necessary to raise the temperature of 10 kg of water from 30°C to 100°C?
(Specific heat capacity of water (c) = 1 kcal/kg °C)
- ii. Will the value of g be the same everywhere on the surface of the earth? Justify your answer.
- iii. Identify the exothermic and endothermic reactions :
 - a. $\text{HCl} \rightarrow \text{NaOH} \longrightarrow \text{NaCl} + \text{H}_2\text{O} + \text{heat}$
 - b. $2\text{KClO}_{3(s)} \xrightarrow{\Delta} 2\text{KCl}_{(s)} + 3\text{O}_2 \uparrow$
 - c. $\text{CaO} + \text{H}_2\text{O} \longrightarrow \text{Ca(OH)}_2 + \text{heat}$
 - d. $\text{CaCO}_{3(s)} \xrightarrow{\Delta} \text{CaO}_{(s)} + \text{CO}_2 \uparrow$
- iv. Give one function of each of the following satellites:
 - a. Communication satellite
 - b. Earth observation satellite
- v. State any two uses of ethanol.

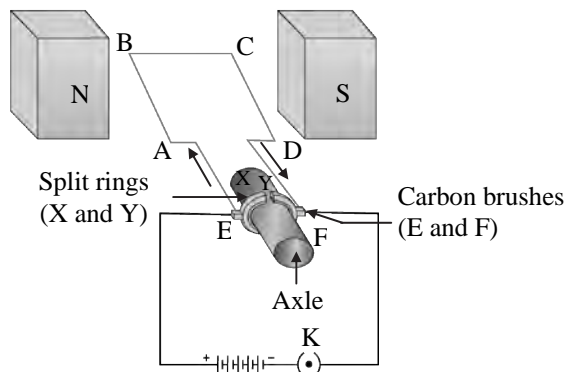
Q.3. Answer any five of the following questions: [15]

i. Identify the phenomenon shown in the figure below. State and explain it :

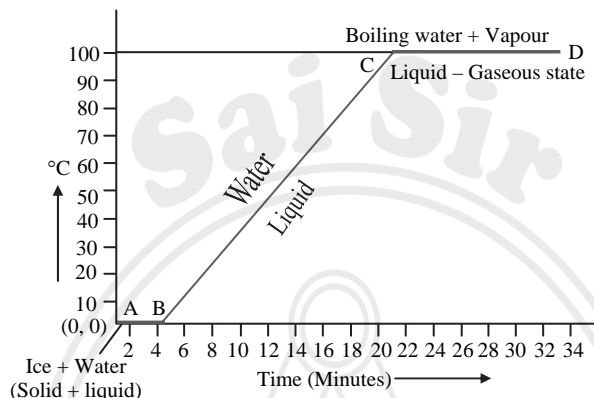


ii. Observe the following diagram and answer the questions given below :

- a. Identify the device shown in the figure.
- b. On which rule is the working of the above device based?
- c. Give any two uses of this device.



- iii. a. The atomic number of nitrogen is 7. How many electrons are present in the valence shell of nitrogen?
- b. Molecular formula of nitrogen is N_2 . Draw the electron-dot structure and line structure of a nitrogen molecule.
- iv. The mass and weight of an object on the earth are 5 kg and 49 N respectively. What will be their values on the moon? Assume that the acceleration due to gravity on the moon is $1/6$ th of that of the earth.
- v. To which group does the halogen family belong? Write any four halogens.
- vi. What is redox reaction? Explain with the help of a balanced chemical equation.
- vii. Explain the following temperature vs. time graph :

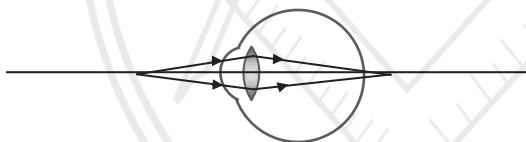


- viii. An element has its electronic configuration as 2, 8, 2. Answer the following questions :
 - a. What is the atomic number of this element?
 - b. What is the group of this element?
 - c. To which period does this element belong?

Q.4. Attempt any one of the following questions:

[5]

- i. a. What is the minimum distance of distinct vision for normal human eye?
- b. Identify the defect of vision shown in the figure :



- c. Focal length of a convex lens is 25 cm. What is its power?
- d. Define power of a lens.
- ii. State the general properties of ionic compounds.

9664080155

BOARD ACTIVITY SHEET: July 2022

Science and Technology Part - 2

Time: 2 Hours

Total Marks: 40

- Note:**
- All questions are compulsory.
 - Use of a calculator is not allowed.
 - The numbers to the right of the questions indicate full marks.
 - In case of MCQs [Q. No. 1(A)], only the first attempt will be evaluated and will be given credit.
 - For each MCQ, the correct alternative (A), (B), (C) or (D) with subquestion number is to be written as an answer.
For E.g.: (i) (A), (ii) (B), (iii) (C).
 - Scientifically correct, labelled diagrams should be drawn whenever necessary.

Q.1. (A) Choose the correct option and write its number for the following questions: [5]

- Glycolysis and _____ are two steps of anaerobic respiration.
(a) Kreb's cycle (b) Electron transfer chain reaction
(c) Fermentation (d) Reduction
- _____ is used in thermal power plant.
(a) Coal (b) Uranium (c) Natural gas (d) Water
- Chemically, vinegar is 4% _____.
(a) Gluconic acid (b) Amino acid
(c) Citric acid (d) Acetic acid
- Government of India has encouraged the _____ for improving the production by launching NKM-16.
(a) Apiculture (b) Vermiculture
(c) Pisciculture (d) Sericulture
- Alcohol consumption mainly affects _____ system.
(a) Respiratory (b) Nervous
(c) Digestive (d) Circulatory

(B) Answer the following questions: [5]

- Write the scientific name of human being.
- Find the odd man out:
Actin, Ossein, Myosin, Aldosterone
- State whether True or False:
The power available from the solar cell is AC.
- I have calcareous spines and I move with tube feet, which phylum do I belong to?
- Write any one example of natural disasters.

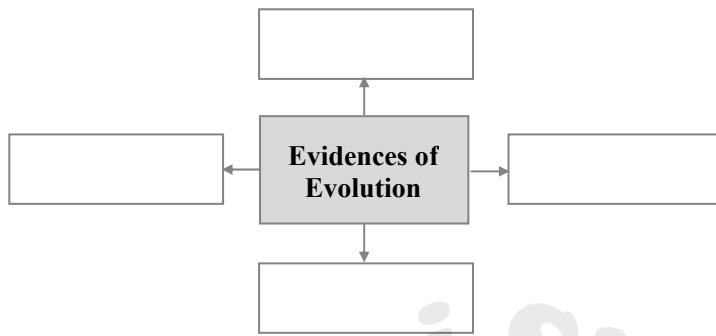
Q. 2. (A) Give scientific reasons: (any two) [4]

- Water is an essential nutrient.
- Tobacco chewing is injurious to health.
- It is absolutely necessary to control the fission reaction in nuclear power plants.

(B) Answer the following questions: (any three)

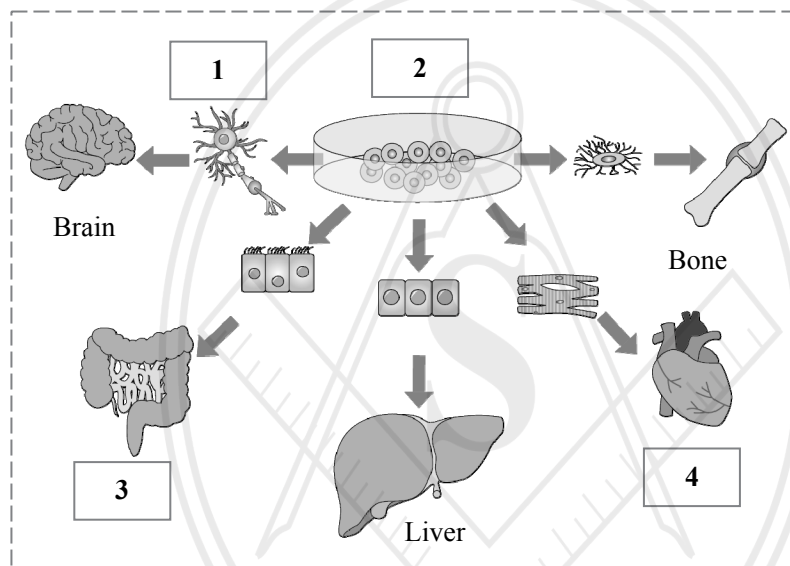
[6]

i. Complete the following chart:



ii. What is environment? Write two types of environment.

iii. Observe the given diagram and write proper names in the blocks.



iv. Which precautions should be followed to maintain the reproductive health?

v. Distinguish between butterfly and bat with the help of two distinguishing characteristics.

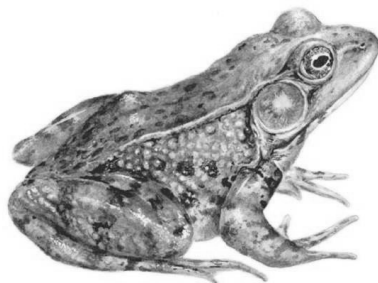
Q. 3. Answer the following questions: (any five)

[15]

i. Redraw the table taking into account the relation between entries in the three columns.

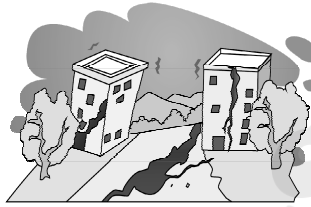
Column I	Column II	Column III
Coal	Kinetic energy	Nuclear power plant
Uranium	Thermal energy	Wind electricity plant
Wind	Nuclear energy	Thermal plant

ii.



- (a) Identify the class of the animals shown in the figure.
- (b) Write two characteristics of that class.

- iii. Which precautions are necessary for proper decomposition of domestic waste?
- iv. Write the importance of medicinal plants.
- v. What will you do? Why?
 - (a) You are spending more time on Internet/mobile games, phone, etc.
 - (b) You have to use free space around your house for good purpose.
 - (c) Your brother studying in Std. XII has developed stress.
- vi. The following are some picture of disasters. Which precautions would you take during these disasters?



(a)



(b)



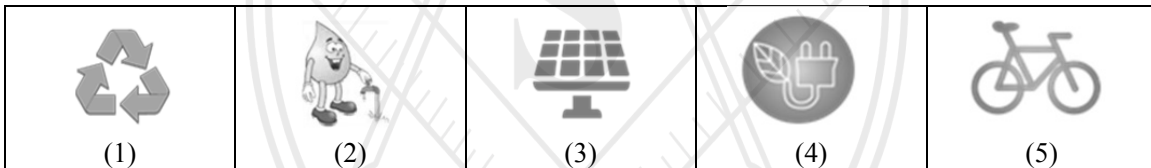
(c)

- vii. Explain the concept of connecting links with two examples.
- viii.
 - (1) Write two sources of lipids.
 - (2) How much energy is obtained from lipids?
 - (3) What is produced after digestion of lipids?

Q. 4. Answer the following questions: (any one)

[5]

- i. Draw a neat and labelled diagram of female reproductive system and give the functions of:
 - (a) Oviduct
 - (b) Ovary
 - (c) Uterus
- ii. Explain the meanings of the following symbols:



 9664080155

BOARD QUESTION PAPER: JULY 2022

HISTORY AND POLITICAL SCIENCE

Time: 2 Hours

Max. Marks: 40

- Note:**
1. All the activities/questions are compulsory.
 2. Figures to the right indicate full marks.
 3. Question Nos. 1 to 5 are based on History and Question Nos. 6 to 9 are based on Political Science.
 4. It is mandatory to write a complete statement as answer in Question No. 1(A) and 6.
 5. In Question Nos. 2(A) and 8(B) the appropriate answer is expected to be written by pen only in the concept map.
 6. In Question No. 1(A), 1(B) and Question No. 6 are repeated then only first attempted answer will be considered.

Q.1. (A) Choose the correct option from the given options and complete the sentences: [3]

- (1) The Sanskrit text of 'Hitopadesh' was translated in German by _____.
(A) James Mill (B) Friedrich Max Muller
(C) Mount Stuart Elphinstone (D) Sir John Marshall
- (2) The earliest museum in the world was discovered in the excavations at the city of _____.
(A) Delhi (B) Harappa
(C) Ur (D) Kolkata
- (3) Bhilar, a village near Mahabaleshwar is known as the 'Village of _____.'
(A) Books (B) Plants
(C) Mangoes (D) Forts

Q.1. (B) Identify the wrong pair in the following and rewrite it: [3]

- (1)

i.	Georg Wilhem Friedrich Hegel	'Reason in History'
ii.	Leopold von Ranke	'The Theory and Practice of History'
iii.	Herodotus	'The Histories'
iv.	Karl Marx	'Discourse on the Method'
- (2)

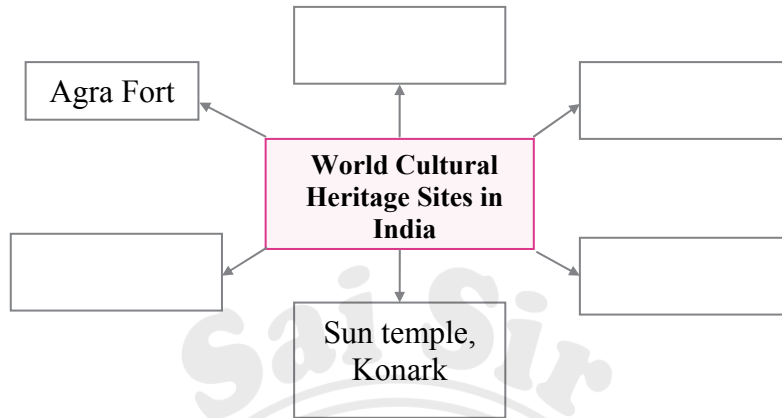
i.	Darpan	Balshastri Jambhekar
ii.	Prabhakar	Acharya P.K. Atre
iii.	Deenbandhu	Krishnarao Bhalekar
iv.	Kesari	Bal Gangadhar Tilak
- (3)

i.	Ranjankhalage (Naturally carved out cavities in rocks) at Nighoj	Geographic tourism
ii.	Forts in Rajasthan	Historical tourism
iii.	A visit to Agricultural University	Agro-tourism
iv.	Himalayan Car Rally	Health tourism

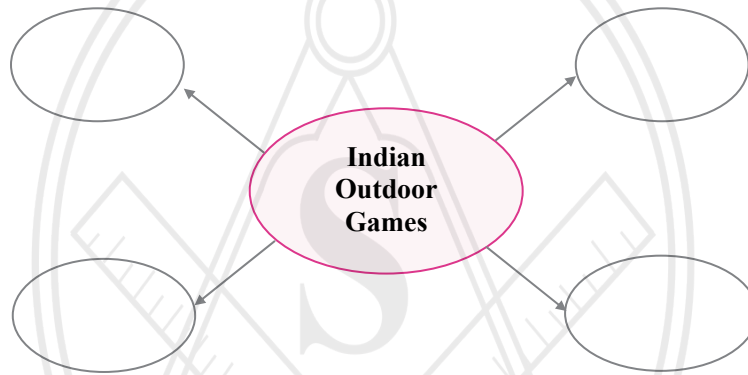
Q.2. (A) Complete the following concept map / chart (any two):

[4]

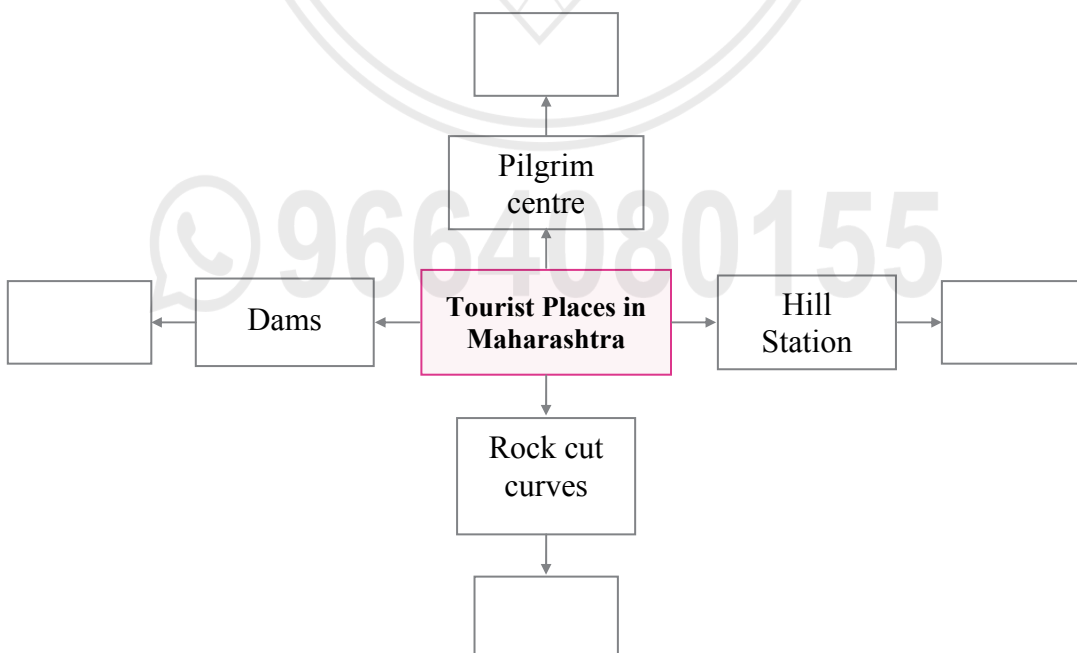
(1) Complete the concept web:



(2) Complete the concept web:



(3) Complete the concept web:

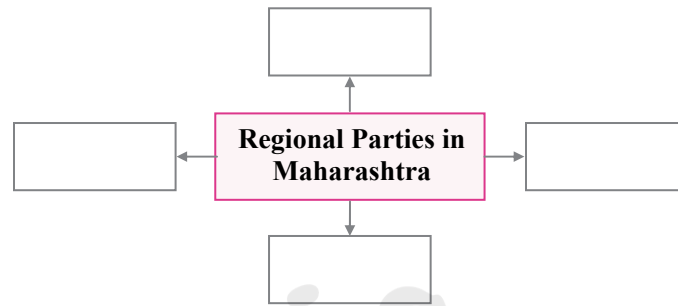


- Q.2 (B) Write short notes on (any two):** [4]
- (1) Voltaire
 - (2) Kesari and Maratha
 - (3) Toys and festival
- Q.3. Explain the following statements with reasons (any two):** [4]
- (1) Historical research was driven to focus in depth on various aspects of women's life.
 - (2) It is essential to study the history of technology.
 - (3) Toys throw light on the History.
 - (4) Only trained persons, who are duly qualified can take up task involved in the work of conservation and preservation.
- Q.4. Read the following passage and answer the questions based on it:** [4]
- Heritage Walks:** To go on a tour for visiting historical places is known as 'Heritage Walk'. One can experience the thrill of being a part of history by participating in heritage walks.
- 'Heritage Walks' as an organised group activity has gained popularity in many countries. India has a rich history, which can be traced back to many millenniums. Every region in India is full of historical places from ancient, medieval and modern period. The 'Heritage Walk' organised in the city of Ahmedabad is well-known. In the cities of Mumbai and Pune in Maharashtra such walks are organised regularly. Heritage walks can encourage people to support projects like conservation and preservation of historical monuments, to collect authentic information about them and to publish it through various media. Residences of renowned citizens who have passed away are also part of heritage. In some cities, 'blue plaques' with the names and other relevant information of such citizens are placed on their residences, as a part of heritage scheme.
- Questions:**
- (1) What is meant by Heritage Walk? (1)
 - (2) In which cities in India heritage walk is organised? (1)
 - (3) Name the place in your district that you would like to visit as part of heritage walk and why? (2)
- Q.5. Answers the following questions in detail (any two):** [6]
- (1) What is Marxist history?
 - (2) Why is library management important?
 - (3) Explain the difference between Indoor games and Outdoor games.
 - (4) What different methods of communication were adapted before the advent of newspapers?
- Q.6. Choose the correct option from the given options and complete the statements:** [2]
- (1) In Maharashtra, _____ seats are reserved for women in local and self-governing institutions.
(A) 25 % (B) 30 % (C) 40 % (D) 50 %
 - (2) To increase agricultural production and become self-sufficient with regard to food grains _____ was initiated.
(A) Water Revolution (B) Green revolution
(C) Industrial revolution (D) White revolution.
- Q.7. State whether the following statements are true or false. Give reasons for your answer (any two):** [4]
- (1) Indian democracy is considered the largest democracy in world.
 - (2) Coalition politics leads to instability.
 - (3) The movement does not need leadership.
- Q.8. (A) Explain the following concepts (any one):** [2]
- (1) Right to Information
 - (2) Electoral reforms

(B) Do as directed (any one):

[2]

(1) Complete the concept map:



(2) Complete the table:

State / Area	Tribes
(1) Odisha	_____
(2) _____	Koli
(3) Chota Nagpur	_____
(4) _____	Santhal

Q.9. Answer in brief (any one):

[2]

- (1) Explain the functions of the Election Commission.
- (2) Explain the nature of farmer's movement in India.

 9664080155

BOARD QUESTION PAPER: JULY 2022

GEOGRAPHY

Time: 2 Hours

Max. Marks: 40

Note:

1. All the activities/ questions are compulsory.
2. Figures to the right indicate full marks.
3. For Q. No. 4(A) use supplied outline map of India and tie it to your answer-book.
4. For Q. No. 6(A) use the graph paper supplied to you and attach it to the main answer-book.
5. Use of stencils is allowed for drawing map.
6. Draw neat diagrams and sketches wherever necessary.
7. Answers should be written in Black or Blue ink only. Answers written in pencil will not be considered.
8. Use of Pencil / Colour Pencil is allowed for drawing diagrams, sketches and map work.

Q.1. Complete the following sentences by choosing the alternatives from those given and rewrite the sentences in your answer-book: [4]

1. Like Brazil, India too has _____.
 (i) High mountains (ii) Ancient plateau
 (iii) West-flowing rivers (iv) Snow-capped mountains
2. In the mixed forests at the foothills of Himalayas _____ trees are found in plenty.
 (i) Sal (ii) Sundar (iii) Khejri (iv) Teak
3. In Brazil _____ a South-West flowing river is used for water-ways.
 (i) Puraguaco (ii) Parnaiba (iii) Purus (iv) Parana
4. In Narmada valley _____ type of settlements are found.
 (i) Linear (ii) Dispersed (iii) Nucleated (iv) Star-shaped

Q.2. Match the following: [4]

	‘A’		‘B’
(1)	Field Visit	(i)	Sao Paulo
(2)	Climate of India	(ii)	Samba Dance
(3)	Brazil	(iii)	Monsoon type
(4)	Densely populated state in Brazil	(iv)	Teak
		(v)	Follow the instructions of the teacher

Q.3. Write short notes (any two): [4]

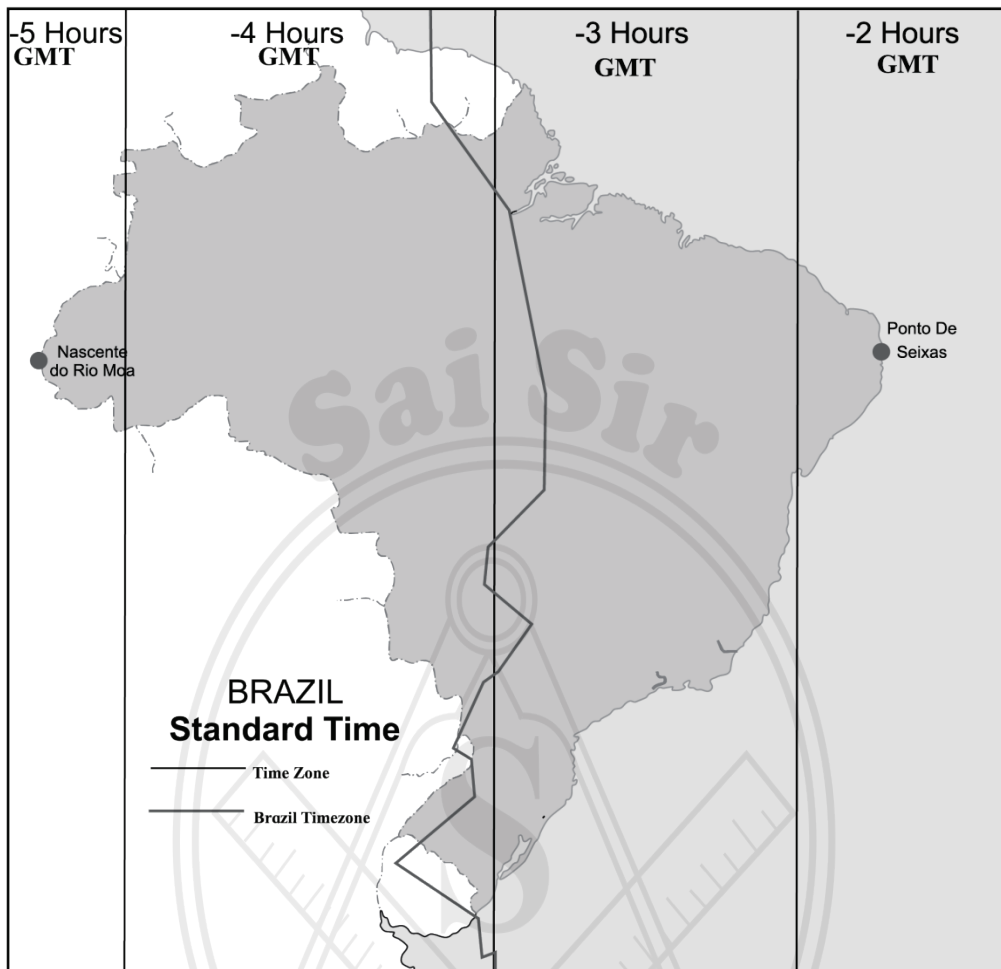
1. Development of communication in Brazil.
2. Western coastal plain.
3. Historical background of Brazil.

Q.4. (A) Mark the following in the outline map of India supplied to you, write the names and give index. (any four): [4]

1. Tropic of Cancer
2. Kaveri River
3. Andaman and Nicobar islands
4. State with highest sex ratio
5. Northernmost state with least density of population
6. Lake Chilka

(B) Observe the given map and answer the questions given below it (any four):

[4]



Questions:

1. What does the above map indicate?
2. How many time zones are shown in the map?
3. Which part of Brazil is ahead of others?
4. What does the dark line in the map show?
5. To which direction does Ponto De Seixas lie?

Q.5. Give geographical reasons for the following (any two):

[6]

1. There are few natural ports on the eastern coast of India.
2. Tropical cyclones occur rarely in Brazil.
3. Urbanization is increasing rapidly in India.
4. Rain forests in Brazil are called 'Lungs of the World'.

Q.6 (A) With the help of given statistical data, prepare a simple bar graph and answer the following questions:

**India-Trade (% of GDP)
(1980 to 2016)**

[6]

Years	Percentage of GDP
1980	15
1990	16
2000	58
2010	50
2016	40

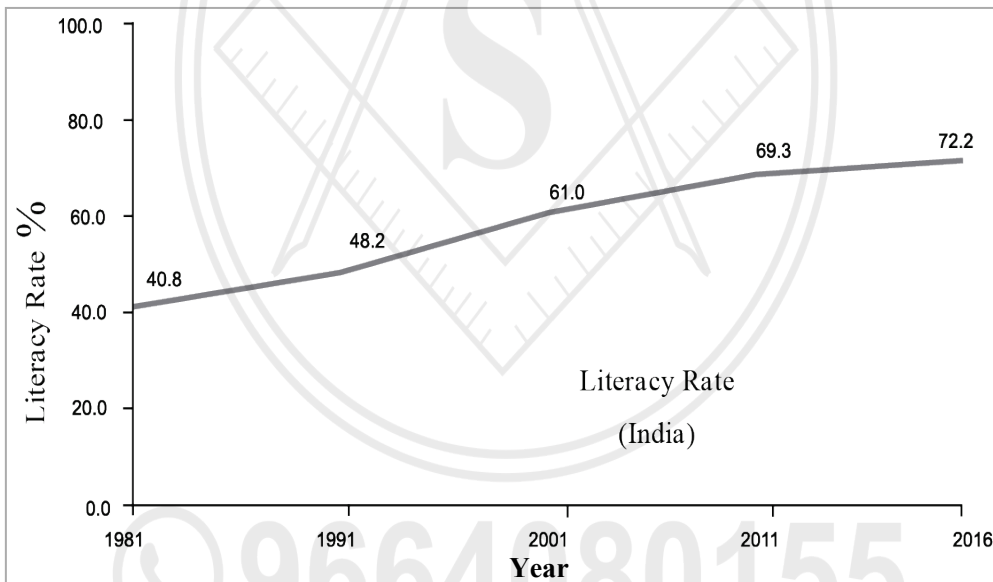
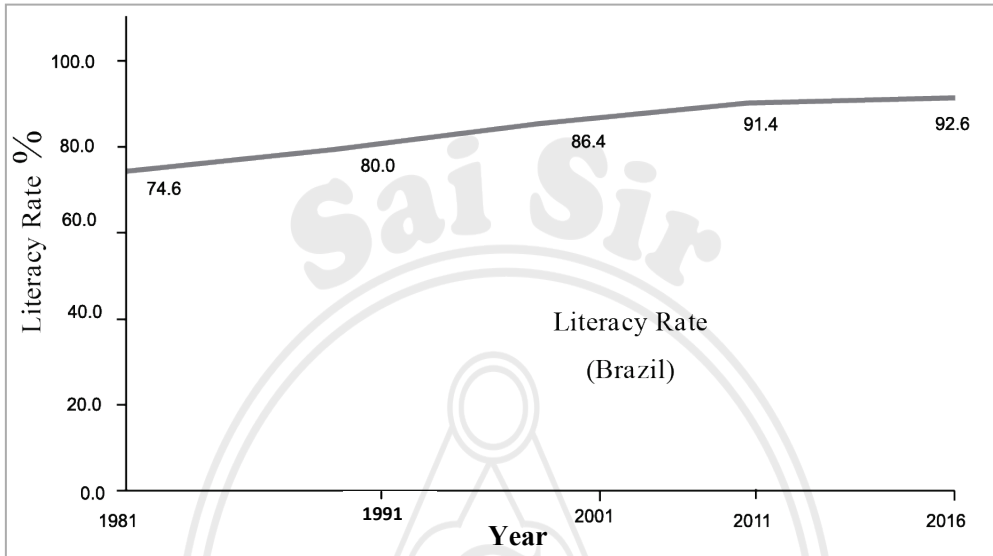
Questions:

1. What does the graph show?
2. What was the contribution of trade in GDP in the year 2010?
3. How much was a decrease in the percentage of GDP in the year from 2010 to 2016?

Or

Q.6 (B) Observe the following graph and answer the questions:

[6]



Questions:

1. What does the graph indicate?
2. Which country has a high literacy rate?
3. In the year 2001 how much more is the literacy rate in Brazil than India?
4. What is the highest literacy rate in India?
5. Which decade in India shows the highest increase in literacy rate?
6. How much is the literacy rate in Brazil in the year 2011?

Q.7. Answer the following questions in detail (any two):

[8]

1. Prepare a questionnaire for an interview with a farmer during the field visit.
2. Differentiate between the human settlements in Ganga river basin and the Amazon river basin.
3. State the major forests type in India and explain thorny and shrub type vegetation.

BOARD QUESTION PAPER: JULY 2022

Mathematics Part - I

Time: 2 Hours

Max. Marks: 40

- Note:**
- i. All questions are compulsory.
 - ii. Use of a calculator is not allowed.
 - iii. The numbers to the right of the questions indicate full marks.
 - iv. In case of MCQs [Q. No. 1(A)] only the first attempt will be evaluated and will be given credit.
 - v. For ever MCQ, the correct alternative (A), (B), (C) or (D) with subquestion number is to be written as an answer.

Q.1. (A) For every subquestion four alternative answers are given. Choose the correct answer and write the alphabet of it: [4]

- i. For an A.P., $a = 3.5$, $d = 0$, then $t_n =$ _____.
 (A) 0 (B) 3.5 (C) 103.5 (D) 104.5
- ii. Find the value of the determinant $\begin{vmatrix} 5 & 3 \\ -7 & -4 \end{vmatrix}$.
 (A) -1 (B) -41 (C) 41 (D) 1
- iii. Which of the following quadratic equations has roots 3 and 5?
 (A) $x^2 - 15x + 8 = 0$ (B) $x^2 + 8x - 15 = 0$
 (C) $x^2 + 3x + 5 = 0$ (D) $x^2 - 8x + 15 = 0$
- iv. There are 40 cards in a bag. Each card bears a number from 1 to 40. One card is drawn at random. What is the probability that the card bears a number which is a multiple of 5?
 (A) $\frac{1}{5}$ (B) $\frac{3}{5}$ (C) $\frac{4}{5}$ (D) $\frac{1}{3}$

(B) Solve the following subquestions: [4]

- i. The sum of father's age and twice the age of his son is 70. Use the given information to form a linear equation in two variables.
- ii. A die is thrown. Write sample space.
- iii. Find the roots of the quadratic equation $(x + 5)(x - 4) = 0$.
- iv. Find the first term and common difference for an A.P., 127, 135, 143, 151, ...

Q.2. (A) Complete and write any two activities from the following: [4]

- i. Complete the following activity to find the 27th term of the following A.P.,
 9, 4, -1, -6, -11, ...

Activity:

Here, $a = 9$, $d =$, $n = 27$

$t_n =$ $+ (n - 1)d$...[Formula]

$\therefore t_{27} = 9 + (\text{} - 1) (-5)$

$\therefore t_{27} =$

- ii. One die is rolled. Complete the following activity, to find the probability that the number on the upper face is prime.

Activity:

S is the sample space.

$S = \{\text{}\}$

$\therefore n(S) = 6$

Even A: Getting a prime number on the upper face.

$$A = \{ \boxed{} \}$$

$$\therefore n(A) = 3$$

$$P(A) = \frac{n(A)}{\boxed{}} \quad \dots[\text{Formula}]$$

$$\therefore P(A) = \boxed{}$$

iii. Complete the following activity to find the value of x .

Activity;

$$3x - y = 2$$

$$2x + y = 8$$

$$\boxed{}x = \boxed{}$$

$$\therefore x = \frac{\boxed{}}{5}$$

$$\therefore x = \boxed{}$$

(B) Solve any four subquestions from the following:

[8]

- i. For solving the following simultaneous equations, find the values of $(x + y)$ and $(x - y)$.
 $15x + 17y = 21$, $17x + 15y = 11$.
- ii. Find the value of the discriminant of the quadratic equation $2y^2 - y + 2 = 0$.
- iii. Find the sum of the first 21 even natural numbers.
- iv. Two coins are tossed simultaneously. Find the probability of the event of getting no head.
- v. Find D_x and D_y for the following simultaneous equations.
 $x + 2y = -1$, $2x - 3y = 12$

Q.3. (A) Complete and write any one activity from the following:

[3]

- i. From three men and two women, environment committee of two persons is to be formed. To find the probabilities of the given events, complete the following activities.

Event A: There must be at least one woman member.

Event B: Committee of one man and one woman to be formed.

Activity:

Let M_1, M_2, M_3 be three men and W_1, W_2 be two women. Out of these men and women environment committee of the 2 persons is to be formed.

$$S = \{M_1M_2, M_1M_3, M_2M_3, M_1W_1, M_1W_2, M_2W_1, M_2W_2, M_3W_1, M_3W_2, \boxed{}\}$$

$$\therefore n(S) = 10$$

Event A: There must be at least one woman member.

$$A = \{M_1W_1, M_1W_2, \boxed{}, M_2W_2, M_3W_1, M_3W_2, W_1W_2\}$$

$$\therefore n(A) = \boxed{}$$

$$P(A) = \frac{n(A)}{n(S)} \quad \dots[\text{Formula}]$$

$$\therefore P(A) = \frac{\boxed{}}{10}$$

Event B: Committee of one man and one woman to be formed.

$$B = \{M_1W_1, M_1W_2, M_2W_1, \boxed{}, M_3W_1, M_3W_2\}$$

$$\therefore n(B) = 6$$

$$P(B) = \frac{n(B)}{n(S)} \quad \dots[\text{Formula}]$$

$$\therefore P(B) = \frac{6}{10}$$

$$\therefore P(B) = \frac{3}{\boxed{}}$$

- ii. Complete the following activity to find the roots of the quadratic equation $25x^2 + 30x + 9 = 0$ by formula method.

Activity:

$$25x^2 + 30x + 9 = 0$$

Comparing the equation with $ax^2 + bx + c = 0$, we get

$$a = 25, b = \boxed{}, c = 9$$

$$b^2 - 4ac = (30)^2 - 4 \times 25 \times 9$$

$$= 900 - 900$$

$$= \boxed{}$$

$$x = \frac{\boxed{} \pm \sqrt{b^2 - 4ac}}{2a}$$

$$= \frac{-\boxed{} \pm \sqrt{0}}{2 \times 25}$$

$$\therefore x = \frac{-30+0}{50} \quad \text{or} \quad \therefore x = \frac{\boxed{}-0}{50}$$

$$\therefore x = \frac{-30}{50} \quad \text{or} \quad \therefore x = \frac{30}{50}$$

$$\therefore x = -\frac{\boxed{}}{5} \quad \text{or} \quad \therefore x = \frac{3}{5}$$

(B) Attempt any two subquestions from the following:

[6]

- i. Solve the given equation by factorisation: $5m^2 = 22m + 15$.

- ii. Solve the following equations:

$$3x - 2y = \frac{5}{2}, \frac{1}{3}x + 3y = -\frac{4}{3}$$

- iii. Length and breadth of a rectangular garden are 77 metres and 50 metres. There is a circular lake in the garden having diameter 14 m. Due to wind, a towel from a terrace on a nearby building fell into the garden. Find the probability of the event that it fell in the lake.

- iv. A two digit number and the number with digits interchanged add up to 143. In the given number the digit in units place is 3 more than the digit in the tens place. Find the original number.

Q.4. Attempt any two subquestions from the following:

[8]

- i. Solve the following simultaneous equations graphically:

$$x + y = 4, 3x - 2y = 7.$$

- ii. A train travels 240 km with uniform speed. If the speed of the train is increased by 12 km/h, it takes one hour less to cover the same distance. Find the initial speed of the train.

- iii. If the sum of the first p terms of an A.P. is equal to the sum of first q terms, then show that the sum of its first $(p + q)$ terms is zero ($p \neq q$).

Q.5. Solve the following subquestions: (Any one)

[3]

- i. The measures of the angles of a quadrilateral are in A.P. The measure of largest angle is twice the smallest. Find the measures of all angles of the quadrilateral.

[Assume measures of angles as $a^\circ, (a + d)^\circ, (a + 2d)^\circ, (a + 3d)^\circ$,
(where $a < a + d < a + 2d < a + 3d$)]

- ii. The product of two numbers is 352 and their mean is 19. Find the numbers.

BOARD QUESTION PAPER: JULY 2022

Mathematics Part - II

Time: 2 Hours

Max. Marks: 40

Note:

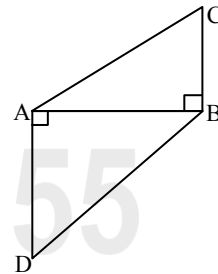
- i. All questions are compulsory.
- ii. Use of calculator is not allowed.
- iii. The numbers to the right of the questions indicate full marks.
- iv. In case of MCQs [Q. No. 1(A)] only the first attempt will be evaluated and will be given credit.
- v. For every MCQ, the correct alternative (A), (B), (C) or (D) with sub-question number is to be written as an answer.
- vi. Draw proper figures for answers wherever necessary.
- vii. The marks of construction should be clear. Do not erase them.
- viii. Diagram is essential for writing the proof of the theorem.

Q.1. (A) Four alternative answers are given for every sub-question. Select the correct alternative and write the alphabet of that answer: [4]

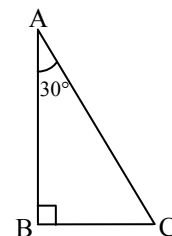
- i. From the following points _____ point lies to the right side of the origin on X-axis.
 (A) $(-2, 0)$ (B) $(0, 2)$
 (C) $(2, 3)$ (D) $(2, 0)$
- ii. $\Delta PQR \sim \Delta STU$ and $A(\Delta PQR) : A(\Delta STU) = 64 : 81$, then what is the ratio of corresponding sides?
 (A) $8 : 9$ (B) $64 : 81$
 (C) $9 : 8$ (D) $16 : 27$
- iii. In a right angled triangle; if the sum of the squares of sides making right angle is 169, then what is the length of hypotenuse?
 (A) 15 (B) 13
 (C) 5 (D) 12
- iv. If $\tan \theta = \sqrt{3}$, then the value of θ is _____
 (A) 60° (B) 30°
 (C) 90° (D) 45°

(B) Solve the following sub-questions: [4]

- i. In the given figure, seg $CB \perp$ seg AB , seg $AD \perp$ seg AB .
 If $BC = 4$, $AD = 8$,
 then find $\frac{A(\Delta ABC)}{A(\Delta ADB)}$.



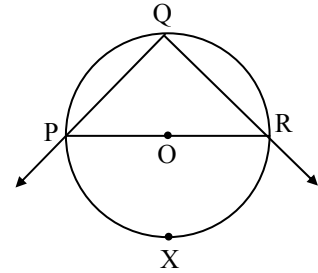
- ii. Find the coordinates of the midpoint of the segment joining the points $(22, 20)$ and $(0, 16)$.
- iii. Two circles having radii 7 cm and 4 cm touch other internally. Find the distance between their centres.
- iv. In ΔABC , $\angle B = 90^\circ$, $\angle A = 30^\circ$, $AC = 14$, then find BC .



Q.2. (A) Complete the following activities and rewrite it (any two):

[4]

- i. In the above figure, $\angle PQR$ is inscribed in the semicircle PQR. Complete the following activity to find measure of $\angle PQR$.



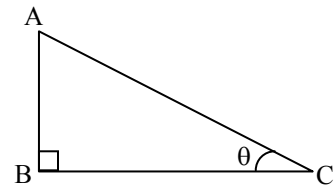
Activity:
 $m(\text{arc PQR}) = 180^\circ$... (measure of semicircle)

$\therefore m(\text{arc PXR}) = \square$

$\therefore \angle PQR = \frac{1}{2} m(\text{arc } \square)$... \square
 $= \frac{1}{2} \times 180^\circ$

$\therefore \angle PQR = \square$

- ii. In $\triangle ABC$, $\angle B = 90^\circ$, $\angle C = \theta^\circ$ then complete the activity to derive the trigonometric identity.



Activity:
 $AB^2 + BC^2 = \square$... (Pythagoras theorem)

$\therefore \frac{AB^2 + BC^2}{AB^2 + AB^2} = \frac{AC^2}{AB^2}$... (dividing by AB^2)

$\therefore 1 + \frac{BC^2}{AB^2} = \frac{AC^2}{AB^2}$

But $\frac{\square}{AB^2} = \cot^2 \theta$ and $\frac{AC^2}{\square} = \text{cosec}^2 \theta$

$\therefore 1 + \square = \text{cosec}^2 \theta$

- iii. In $\triangle PQR$, if $PN = 12$, $NR = 8$, $PM = 15$, $MQ = 12$, then complete the following activity to justify whether seg NM is parallel to side RQ or not.

Activity:

In $\triangle PQR$,

$\frac{PN}{NR} = \frac{12}{\square} = \frac{3}{2}$... (i)

and $\frac{PM}{MQ} = \frac{15}{12} = \frac{\square}{4}$... (ii)

$\therefore \frac{PN}{NR} \neq \frac{PM}{MQ}$... [from (i) and (ii)]

\therefore By \square

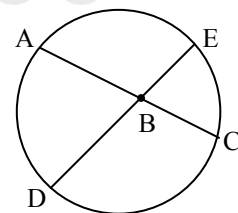
seg NM is \square to side RQ.

[Note : The activity has been modified.]

(B) Solve the following sub-questions (Any four):

[8]

- i. In the given figure, chord AC and chord DE intersect each other at point B. If $\angle ABE = 108^\circ$ and $m(\text{arc AE}) = 95^\circ$, Then find $m(\text{arc DC})$.

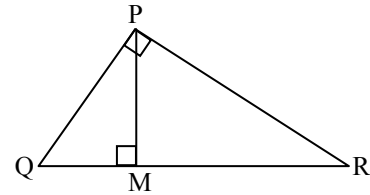


- ii. Find the distance between the points $P(-1, 1)$ and $Q(5, -7)$.
 iii. Construct a tangent to a circle with centre P and radius 3.5 cm at any point M on it.
 iv. Find the length of diagonal of rectangle having sides 11 cm and 60 cm.
 v. If $\sin \theta = \frac{7}{25}$, then find values of $\cos \theta$ and $\tan \theta$.

Q.3. (A) Complete the following activities and rewrite it (any one):

[3]

- i. In the above figure
 $\angle QPR = 90^\circ$, seg $PM \perp$ seg QR and $Q-M-R$. $PM = 10$,
 $QM = 8$. Complete the following activity to find the
 value of QR .



Activity:
 In ΔPQR , $\angle QPR = 90^\circ$ and
 seg $PM \perp$ seg QR

$\therefore PM^2 = \square \times MR$

....(Given)

....

$\therefore (\square)^2 = 8 \times MR$

$\therefore \frac{100}{8} = MR$

$\therefore \square = MR$

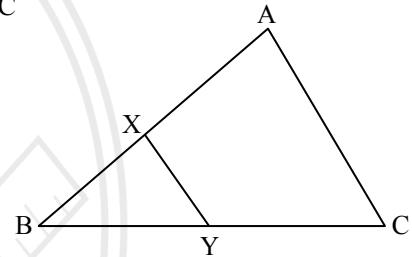
Now $QR = QM + MR$

....(\because Q-M-R)

$\therefore QR = 8 + \square$

$\therefore QR = \square$

- ii. In the above figure, in ΔABC seg $XY \parallel$ side AC , $A-X-B$, $B-Y-C$
 If $2AX = 3BX$ and $XY = 9$,
 then complete the following activity to find value of AC .



Activity:

$2AX = 3BX$

....(Given)

$\therefore \frac{AX}{BX} = \frac{\square}{\square}$

$\therefore \frac{AX+BX}{BX} = \frac{3+2}{A(\Delta PQR)}$

....(Componendo)

$\therefore \frac{AB}{BX} = \frac{5}{2}$

....(i)

$\Delta ABC \sim \Delta BYX$

....(test of similarity)

$\therefore \frac{BA}{BX} = \frac{AC}{\square}$

....(c.s.s.t)

$\therefore \frac{BA}{BX} = \frac{AC}{\square}$

....[from (i)]

$\therefore AC = \square$

(B) Solve the following sub-questions (any two):

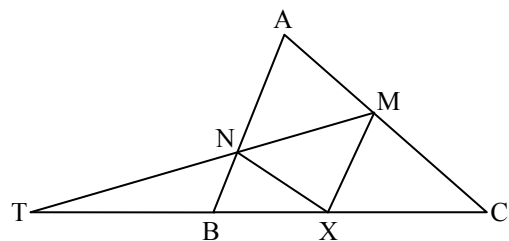
[6]

- i. Prove that $\sec \theta + \tan \theta = \frac{\cos \theta}{1 - \sin \theta}$.
- ii. Find the coordinates of centroid of the triangle whose vertices are $(4, 7)$, $(8, 4)$, $(7, 11)$.
- iii. Prove that "Opposite angles of a cyclic quadrilateral are supplementary".
- iv. Draw a circle with centre O and radius 3.5 cm. take a point P at a distance 7.5 cm from the centre. Draw tangents to the circle from point P .

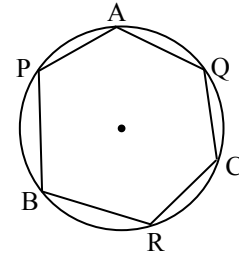
Q.4. Solve the following sub-questions (any two):

[8]

- i. In ΔABC , point X is any point on side BC .
 seg $XM \parallel$ seg AB and seg $XN \parallel$ seg AC .
 Extend seg MN such that it intersects extended
 side CB in point T .
 Then prove that $TX^2 = TB \times TC$.



- ii. Draw triangle ABC, right angle at B such that AB = 3 cm, BC = 4 cm. Now construct ΔPBQ similar to ΔABC each of whose sides are $\frac{7}{4}$ times the corresponding sides of ΔABC .
- iii. In the given figure, points A, P, B, R, C, Q are on the circle. After joining the given points as shown in the figure it forms a hexagon, then prove that $\angle APB + \angle BRC = 360^\circ - \angle AQC$.



Q.5. Solve the following sub-questions (Any one):

[3]

- i. ΔABC and ΔPQR are equilateral triangles with altitudes $2\sqrt{3}$ and $4\sqrt{3}$ respectively, then:
- Find the length of side AB and side PQ
 - Find $\frac{A(\Delta ABC)}{A(\Delta PQR)}$
 - Find the ratio of perimeter of ΔABC to the perimeter of ΔPQR .
- ii. In a circle with centre O, PA and PB are tangents from an external point P. E is the point on the circle such that O-E-P. Tangent drawn at E intersects PA and PB in point C and D respectively. If PA = 10, then write the answers to the following questions:
- Draw the suitable figure using given information.
 - Write the relation between seg PA and seg PB
 - Find the perimeter of ΔPCD .

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